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The Middlebury-Cornwall project.

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THE MIDDLEBURY-CORNWALL PROJECT

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THE MIDDLEBURY-CORNWALL PROJECT

John V. Henderson

February 1, 1962

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PREFACE

I am indebted to Dr. Donald A. Campbell, Director of Teacher Training at Middlebury College, for his cooperation in providing the documents that made the background study of teacher training at Middlebury possible.

For time spent in conversation with the author and for materials on team teaching willingly shared, I am indebted to Dr. Robert H. Anderson of the Harvard Graduate School of Education.

To Miss Carol Kellogg, a graduate of Bennington College, who has served the project as supervising specialist and has been of great assistance in working on evaluative data, I also express my appreciation.

Chapter I

Introduction

This report will deal with the pilot stage of a plan for the undergraduate training of teachers as elementary specialists. The historical background which brought about the need for a new training pattern is described in Chapter I. Pertinent Literature in the fields of team teaching, specialization and teacher training are reviewed next. There is no single plan which fits perfectly the training device to be described here as the Middlebury-Cornwall Project; however, there are existing reports that have something in common with the Middlebury Project. Succeeding chapters then describe the structure, functions and evaluation reported as it actually took place during the planning and pilot stage of the Project.

The term "specialist," as it is used here, calls for clarification, for it is a term that has been used in many contexts. By "specialist" the Project Director means a Middlebury College senior who has both academic background and keen interest in the subject he will teach. The specialist's academic background includes eleven hours of courses for which he is given professional education credit toward certification. Upon successful completion of practice teaching, the specialist is awarded seven additional hours toward certification. This gives him a total of 18 hours of professional education credit. In addition to this preparation, our elementary specialist completes his liberal arts college requirements in general education and in his subject major.

These specialists work as a team, each responsible for his own subject.

The subjects taught are arithmetic, science, history and geography, language arts, a foreign language, and art. Prior to assuming the responsibility of teaching, the student completes a study of the Project's organization and curriculum. He also outlines his work for the semester. As a team member, each specialist must participate in the following three phases of the Project: (1) teach the assigned subject, (2) observe each of the other team members at work, (3) attend a weekly seminar for planning, discussion and evaluation.

This Project is not an effort to train teachers for departmental work where their subject specialty becomes their only concern. It is by means of the observation of fellow team members and the joint curriculum planning of the seminar that we insure teamwork among our specialists. The team members are encouraged to complement one another's ideas on the subject matter; for example, the study of longitude and latitude could be worked out jointly in geography and arithmetic.

In February, 1961, the project got under way. A six-member team of specialists undertook their practice teaching assignment in Cornwall, a town adjoining Middlebury. The team limited its work to the sixth grade. The Teacher Training Program assumed full responsibility for curriculum planning and financial support of this pilot stage.

At the end of its first semester of operation the pilot stage of the Project underwent a long evaluation culminating in a meeting of the Cornwall school committee. The results of questionnaires sent to parents, and the evaluative statements of team members were shared with the committee. A new contract between the College and the town for the year 1961-1962

was discussed. Such an agreement was subsequently drafted and accepted by both parties.

The following statistics will give an idea of the proportionate number of students receiving training in the Middlebury-Cornwall Project. In 1960-1961 there were 112 students enrolled in the Teacher Training Program, 47 in elementary education and 65 in secondary. Of the 21 seniors who completed elementary practice teaching in 1960-1961, six were trained as specialists in the Middlebury-Cornwall Project during its half-year pilot stage.¹ The present plan for 1961-1962 is to train 12 students as elementary specialists out of a total of 20 who will practice teach at the elementary level. If 1961-1962 findings so indicate, it is conceivable that all elementary candidates will be trained as elementary specialists.

¹Report to the Ford Foundation, 1960-1961 (Middlebury, Vt., Middlebury College Teacher Training Program, 1961), p. 3.

Chapter II

BACKGROUND OF REPORT

Dissolving the Department of Education

At Middlebury College educational policy is governed by a committee chosen from the faculty. In 1959 this Educational Policy Committee recommended to the faculty that a Teacher Training Program be established to replace the Department of Education. The following statement of philosophy gives an indication of the climate in which the Teacher Training Program, and later the Middlebury-Cornwall Project, were conceived.

Middlebury College has long been actively interested in teacher training and is proud of the long line of successful teachers it has graduated. The College believes that a liberal arts education provides a rich background and an excellent training for the development of the potential teacher. The College recognizes that many of its students have a spirit of dedication that frequently manifests itself in the desire to teach. It wishes to encourage such students and to equip them for productive teaching careers.

The College believes that the most desirable education for teachers emphasizes subject matter in preference to methods of teaching. It also recognizes that some study of the problems of the teacher in the classroom and practice teaching under expert supervision are invaluable.

A substantial number of courses now offered provide material suited to the needs of the future teacher within the spirit and framework of the liberal arts college. These courses count toward the Middlebury degree and are also certifiable by many state boards of education. As part of the effort to encourage worthy students to train for the teaching profession, credit for the degree will be given for work in practice teaching and educational problems.

The proposed program is sufficient to meet minimum certification requirements in many states. The very diverse requirements for full certification in the various states rule out the possibility of the small liberal arts college offering a program of more than minimum certification. It is anticipated that the student seeking a career in teaching will take additional course work, either in a fifth year

program or in summer session to supplement the training provided at Middlebury. It is felt that this further training will be particularly meaningful if taken after actual teaching experience. Further, many school systems require such additional course work as a basis for retaining a position or earning promotion.¹

Within the liberal arts curriculum Middlebury offers courses giving professional education credit. There is no major in Teacher Training. Students who complete the Teacher Training Program graduate with a major in an academic field of their choice, as well as with eighteen professional education credits. An elementary candidate in the program elects the following courses which will total eighteen hours of professional education credit:

History 12.1 and 12.2, History of Western Civilization, two professional education credits
 Psychology 28.1, Developmental Psychology, three credits
 Psychology 33.1, Measurement of Human Performance, three credits
 Teacher Training 32.1, Problems and Methods Seminar for Elementary school Teachers, three credits
 Teacher Training 42.1, 42.2, Practice Teaching, Elementary, seven professional education credits

In addition, a language major may take a course entitled "Methods of Teaching Modern Languages," for which he receives three professional education credits.

Awarding of Ford Foundation Grant to Support New Program

The Ford Foundation expressed an interest in the new Teacher Training Program and found that its philosophy was compatible with that of the Founda-

¹Revised Recommendation of Educational Policy Committee to the Faculty re Teacher Training Program (Middlebury, Vt., Educational Policy Committee, Middlebury College, 1959), p. 1.

tion. A grant was made to the College to support both an elementary and secondary program. The funds, to be distributed over a four-year period, were made available for the school year 1960-1961.

In the spring of 1960 a director was hired to head the program and to teach the secondary methods course and supervise practice teaching in secondary schools. An assistant to the director was hired to teach the elementary methods seminar and supervise elementary practice teaching.

Need for Improved Practice Teaching Program

The local elementary school did not have enough qualified master teachers to handle all the College's practice teachers. In several cases master teachers were evaluated as being adequate classroom teachers but totally inept master teachers. In one case a teacher was found to have a very poor command of the English language. The Middlebury student placed with her found it difficult to maintain the respect necessary in a student teacher-master teacher relationship. Practice teachers complained of the lack of imagination in classes and of teachers' sticking too rigidly to textbooks.

Assuming that to have effective teacher training one must have good master teachers, it became imperative that a new training ground be established. Although it is true that a student can learn from a negative situation, the program has taken the stand that a positive practice teaching situation will produce more learning for the practice teacher than a negative one. Specialization with a team teaching pattern was decided upon as a possible solution to our problem.

Securing of Location for Project

The Project Director visited several towns adjacent to Middlebury to determine whether there was any interest in allo^wing the College to start a Project in specialization at one of their schools. Two towns expressed a positive interest. One of these towns became obviously more desirable because of its proximity to the College and the physical facilities of the school. The town's new elementary school had one unused classroom which could be made available for the Project's use.

At a meeting of the Cornwall Town School Board the Project Director~~s~~ presented a plan for College and school affiliation. After careful consideration, the School Committee voted to accept the College's proposal.¹

¹See Appendix I.

CHAPTER III

Background Literature of the Project

The literature in the field of team teaching and specialization is conspicuously recent. Probably the earliest statement of the concepts basic to team teaching and specialization were made in 1955 by Dean Francis Keppel of Harvard to the president of that institution.¹ The literature on the use of team teaching and specialization as a device for training undergraduate students for elementary teaching is practically non-existent. The literature as reviewed here in any given plan or project will not fit a description of the Middlebury-Cornwall Project; however, an attempt has been made to point out how, in fact, they are different and similar to the Middlebury Project.

The Dual Progress Plan

The Dual Progress Plan, though akin to team teaching, does not, strictly speaking, come under that category.² It does, however, have something to offer the Middlebury-Cornwall Project in its emphasis on specialization.

In the Long Beach and Ossining Schools in New York (Dual Progress Plan) it is being tested at the third through the eighth grade levels in conjunction with New York University's Experimental Teaching Center. That all teachers

¹Keppel, Francis, Personnel Policies for Public Education, Horace Mann Lecture, University of Pittsburgh, 1961.

²Stoddard, George D. The Dual Progress Plan, New York: Harper and Bros., 1961.

are area (subject) specialists "is intended to insure that every student, every year, receives instruction in each of ... six curricular areas from a teacher who knows the area well, likes to teach it, and knows how to teach it to young children."³

The aspect of the Dual Progress Plan that was not found appropriate for adoption by the Middlebury-Cornwall Project is that while "students progress in language arts, social studies, and physical education according to the usual grade system...they progress in science, mathematics and the arts on a non-grade-level basis."⁴ The main reason for not adopting this in Cornwall, is that when the Project began there was only one grade involved and only twelve children. However, in the absence of this, a definite attempt was made to meet the individual needs of both the slow learners and the gifted children. In Language Arts, for instance, the children were divided into three groups for reading to give the children material that would challenge their ability while not asking more than they were capable of.

³Heather, Glen. "The Dual Progress Plan" Educational Leadership (November, 1960). P. 89. See also Trachthan, Gilbert M. The Dual Progress Plan in Long Beach, as prepared for APSS 1960 Yearbook, April 1960. Describes plan of specialization in Long Beach and Ossining, N.Y., in cooperation with School of Education, New York University. See also Flemming, Robert S., Hurley, Beatrice, Keliher, Alice V., and Manolakes, George. "Reaction to the Dual Progress Plan," Educational Leadership (November, 1960), P. 92. The authors maintain that the DPP need evaluation. See also "Should all Elementary Teachers be Subject Matter Specialists?" School Management (1960). Report on Dual Progress Plan by men involved with it.

⁴Ibid.

The Lexington Plan

Under Harvard University's School and University Program for Research and Development, the Lexington Plan was one of the first programs to go under the name of team teaching. The three teams each consist of two grades (one and two, three and four, five and six), and each team has a team leader and senior teacher as well as several other teachers. The team leaders, the senior teachers and the principal form a cabinet which plans the curriculum for the entire school. In addition each team has the help of clerical aides and teacher aids whose purpose is to relieve the teachers from non-professional clerical and supervisory duties.⁵

While the Middlebury-Cornwall Project has had only one grade it has used the Lexington Plan to the extent that the practice teachers form a team which meets weekly under the leadership of the Project Director and the Supervising Specialist, to plan an integrated program and discuss possible ways for making their teaching more effective.

In the Lexington Plan, while they are working towards teaching by all

⁵Bair, Medill, Team Teaching. Lexington, Mass., Lexington Public Schools, 1961.

subject specialists, the teachers at present teach all or most subjects.⁶ Cornwall, on the other hand, has almost all subjects taught by specialists.

Large group instruction is a main feature in the Lexington Plan. The reasoning for teaching many--sometimes over 100-- children at one time is that certain subjects lend themselves to lecture situations from time to time, and by handling all children at once, more time can be devoted to better preparation by the teachers. It also frees other teachers to work with individuals and or small groups. In Lexington large group instruction is usually handled by a specialist in the subject area. Cornwall, as has been pointed out, has had only twelve children, and for this reason has not been able to put this idea into practice.

⁶Anderson, Robert H. "Team Teaching" NEA Journal (March 1961). See also Trump, J. Lloyd and Baynham, Dorsey. Guide to Better Schools: Focus on Change. Chicago, Rand McNally and Co., 1961. Suggestions for improving secondary education, based on experimental Projects in nearly 100 schools. See also Anderson, Robert H., Hagstrom, Ellis A., and Robinson, Wade M., "Team Teaching in an Elementary School," The School Review, 68: 71-85, Spring, 1960. Description of the Franklin School Project in Lexington, Mass., including background questions, details of organization, and the functions of the administrative and instructional cabinets. See also Morse, Arthur D., Schools of Tomorrow -- Today. Doubleday and Co., 575 Madison Ave., New York 22, N.Y., Sept. 1960. Chapter 1, "Team Teaching in Action," is a repeat on the Franklin School Project in Lexington, Mass. Chapter 9 discusses Harvard's teacher-preparation programs. See also Woodring, Paul, and others, "Education in America" -- and S.R. Supplement, Saturday Review, 43: 65-94, Sept. 17, 1960. A collection of articles by Woodring, Arthur D. Morse, Harold House, and others; much of the text represents argument for team teaching.

The Norwalk Plan

While the Lexington Plan began with teams of two grade levels, the Norwalk Plan, like the Middlebury-Cornwall Project, began by having only one grade level on a team. Their teams of one team leader, one cooperating teacher and one teacher aide were in charge of seventy-five to eighty children when they first began. They have, however, since expanded into having teams of teachers for subject areas and the children are grouped on a two-grade-level basis.⁷

The Claremont Teaching Team Program

Although at the graduate level, the Claremont Teaching Team Program has several striking similarities to the Middlebury-Cornwall Project. It is made up of students in the Claremont Graduate School and also of the Education Faculty. It is, like the Middlebury-Cornwall Project, sponsored by the Ford Foundation, but, not like Cornwall, it has more than one team and it operates at both the elementary and secondary levels.

As in the Lexington Plan three main teams were organized with approximately one-third of the teachers responsible for one-third of the children. There are a team leader, about six teachers (some of these are interns and some certified teachers), and a teacher aide on a team. Considered an important feature, of the team, however, is a group of "talented

⁷ Norwalk, Conn. Board of Education. The Norwalk Plan: A study Designed to Establish New Careers for Teachers. Norwalk, Conn., Board of Education, 1959. See also "How to Introduce Team Teaching in Your Elementary Schools," School Management (November, 1961). A report on how it was in Greenwich, Connecticut schools. See also Team Teaching at the Fox Run Elementary School, a report by parents and staff of this Norwalk, Connecticut School.

citizens." "From volunteer speakers, such as scientists, mathematicians, expert story-tellers, children's librarians, artists, musicians, and seasoned travelers, the team pupils find new interests and satisfy temporary demands for knowledge."⁸

The Middlebury-Cornwall Project has called on "talented citizens" from the community and the College from time to time, but on a much less formal basis.

⁸Brownell, John A., The Claremont Teaching Team Program, Claremont Graduate School, Claremont, California (1961), P. 25. See also Brownell, John A. and Taylor, Harris A. "Theoretical Perspectives for Team Teaching," Phi Delta Kappa (January, 1962), this work sets forth some of the assumptions and hypotheses behind Team Teaching. Written by personnel of the Claremont (California) Teaching Team Program. See also Auburn, Maine, Department of Education, Team Teaching: A Report of the Pilot Team, September 1960. It is to be noted that both Claremont and Auburn provide for the training of teachers within their framework.

CHAPTER IV

Project Organization

Each student teacher prior to his team teaching experience is made aware of the rational, organization, and role he is to play in the Project. This preparation takes place during the latter part of his methods seminar. The following paragraphs will describe each phase as it was planned for the pilot stage of the Project.

Rational

In each subject there is a body of material to be taught. These fundamentals must be mastered by the practice teacher before he can properly provide for the individual differences that will exist in the classroom, regardless of the grouping pattern. It is the belief of the director that when a practice teacher feels secure in his subject, he will gain more from his practice teaching experience. It is believed that a teacher can command the attention and respect of pupils when he displays an extensive knowledge of the material to be taught and demonstrates a variety of presentation in an imaginative, flexible approach.

It is the belief of the Project Director that specialists can be profitably assigned to the intermediate grades with the idea that they will have sufficient breadth and depth of courage to reach all members of a class.

One experiment in specialization at the elementary level reports:

Only the teacher thoroughly grounded in "what" he teaches and "how" he teaches can properly guide the learning of youngsters. It seems unlikely that every self-contained classroom can be staffed with teachers capable of teaching the numerous broad areas of knowledge that characterize a single grade. The self-contained classroom also fails to make adequate provision for

individualizing instruction to meet the potentialities of children who differ widely in their capacities for language, arts, social studies, mathematics, science, music and art.⁹

The specialist has the difficult task of teaching young children, guiding them toward making valuable discoveries for themselves, and helping them gain self-respect through genuine accomplishment.

Curriculum Study

The team specialist then is given a statement of purpose for the project,¹⁰ a theoretical proposition for each subject, a curriculum guidepost for history, geography and arithmetic and a list of instructional material.¹¹ The theoretical proposition he may or may not agree with; if, in fact, he finds himself in disagreement, a new proposition must be worked out by him.

Supervision of the Project

The project's authority to operate within a Vermont public school system rests in a contract drawn up between Middlebury College and the town of Cornwall.¹² An additional document outlines with added clarity the lines of supervision.¹³ It will be noted that this document calls

⁹Trachtman, Gilbert M., The Dual Progress Plan in Long Beach, Long Beach, New York, City School District of the City of Long Beach, 1960, p. 2.

¹⁰See appendix II.

¹¹See appendix III thru VIII.

¹²See appendix I.

¹³See appendix IX.

for all major communication to flow first between the Superintendent of schools and the Project Director.

The college employs a supervision specialist full time, to be in charge of the team specialists at the site of the Project. About one-third of the actual teaching at the Project is done by the supervisor. This time is made up of the first two weeks of the school year, mid-semester, and the closing of the year when the team members are not available. The remaining times the team of specialists takes over.

In addition to these teaching responsibilities, the supervising specialist performs many other duties. She offers criticism on the job to team members. These critiques are presented in written form and are discussed with the team members and the Project Director.

Team members are assigned specific times when they are to observe fellow team members. Each week they will observe one lesson in each subject area. The student observer and the student being observed find time to discuss the lesson. Two things will hopefully happen here. Firstly, the observer will keep up to date with how fellow team members are getting along, and, secondly, will share ideas on how to strengthen the lesson observed. It is felt that it is most important to keep up a steady flow of communication between team members lest departmentalization dominate. This student-observer device is designed to guard against this.

Team Seminars

The team seminars are conceived of as part planning and part supervisory devices. This is the only time the Project Director is

assured of meeting all team specialists at once, and he takes time here for supervisory comments. The seminar is defined further to provide time for the correlation of the subjects being taught. This is to be accomplished as each team member discusses his lesson plans for the week. Out of this discussion should come ideas which are later worked into other subject areas. Certain children may be discussed and a careful analysis made by each team member as to the child's possible problem or progress.

Contact teaching hours, observation hours and seminar hours are scheduled for the team specialists in advance.¹⁴ The practice teacher actively participates in ten weeks of this type of teaching and supervision at the end of which he will hopefully be equipped to teach as a specialist at the elementary level.

¹⁴See appendix X.

CHAPTER V

Conclusion

Facing the Project Director, at the termination of the pilot stage of the Project, was the task of collecting data for evaluation. A number of different sources were used.

A questionnaire sent to parents of participants brought back favorable results.¹⁵ Six parents responded and in each case the response was positive.

Team specialists were asked to evaluate the Project.¹⁶ The representative responses that appear in the appendix are by and large positive; however, a good many suggestions for improvement can be found.

The State Helping Teacher for the district visited the Project and saw fit to register his impression in the form of a letter.¹⁷ The letter was generally friendly in tone--he saw evidence of good planning and effective teaching on the part of the team specialists.

The Project Director, after his examination of the pilot stage and with the backing of the College, proposed to the town school board that the Project continue. A contract was drawn up and duly signed by the College and the town of Cornwall to cover the academic year 1961-62.

The school board of Cornwall made a formal statement of their interest in having the Project continue after the termination of Ford Foundation support

¹⁵See Appendix XI.

¹⁶See Appendix XII.

¹⁷See Appendix XIII.

APPENDIX I

AGREEMENT BETWEEN MIDDLEBURY COLLEGE AND THE CORNWALL TOWN SCHOOL BOARD CONCERNING THE MIDDLEBURY-CORNWALL PLAN FOR THE SCHOOL YEAR 1961-1962

May 15, 1961

I. Middlebury College agrees to the following:

1. To supply a full-time supervising specialist for grade six. This individual is to be an employee of the College.
2. To assume all expenses for instructional materials other than those covered under Section II, items 1, 2, and 3.
3. To supply a qualified coordinator for the Project from the College.
4. To cover all basic curriculum considerations prescribed by the School District.
5. To allow the school district guidance director to administer standard tests to the sixth grade (Same tests as those given throughout district schools).
6. To assist in whatever way possible the building up of the school library and the development of a supplementary reading program for the entire school.

II. The Cornwall Town School Board agrees to the following:

1. To provide basic supplies and texts to all sixth grade pupils.
2. To allow the College to recruit seven additional pupils to participate in the sixth grade program.
3. To supply a room, heat, lights and janitor service for the sixth grade Project.
4. To allow the team teaching approach to be used for the instruction of sixth grade pupils.
5. To leave additional curriculum development up to the College Coordinator of the Project. (See Section I, item 4)
6. To express the opinion that the School Board of Cornwall is sufficiently interested in this College affiliation to consider partial support of a supervising specialist in the fall of 1962, and to express an interest in paying the sixth grade teacher in full and still maintaining College affiliation at the termination of Ford Foundation support.

This agreement shall be regarded as public information.

This agreement has been prepared and executed in duplicate at Cornwall in the county of Addison, State of Vermont as of the date first above written; and is to become effective with the first semester of the school year commencing in September, 1961.

APPENDIX II

Statement of Purpose

The Middlebury-Cornwall Project, a plan in team specialization at the sixth grade level, is endeavoring to see if (1) a teacher teaches best when allowed to work in an area where he has interest and a better-than-average academic background; (2) a student who has fulfilled the requirements of the Teacher Training Program at Middlebury College up to practice teaching is capable of doing a better-than-average job of handling his practice teaching assignment; (3) full responsibility for a class should be assumed immediately, requiring the student to assume the role of teacher rather than student teacher or assistant; (4) the students profit from a free exchange of criticism and the opportunity to coordinate their subject with those of the five other team specialists; (5) pupils will have more interesting, challenging, sophisticated, and accurate presentations when taught under this program of specialization.

APPENDIX III

Theoretical Propositions--History and Geography

In general the aim of a history and geography program is to broaden the child's horizons, and to make him aware of the responsibility he has to his society, and of the historical, geographical, and social location of his environment in relation to the larger world.

The social studies aspect of the team teaching plan should establish, first, a sound knowledge of basic historical and geographical material from which the student may develop the ability to view history, both past and current, with an understanding of a time perspective, and to understand the relationship of events to other parts of the world and to other ages.

Pupils should be encouraged throughout the term to think of what significant events are taking place in other parts of the world as their study of a particular part of the world develops, for instance Canada. In this way their development of perspective and of perceptive skills both, will increase.

Studying history in area blocks, such as South America as an overall area, lends itself to geographical treatment. Pupils should be as geographically literate as possible about whatever they are studying, so that emphasis can be devoted to the reasons why a city, farm belt, industry, political area, or culture center grew where it did, (in relation to the range of geographical factors, as well as historical ones). This will challenge the child's reasoning ability as well as his retentive abilities.

Current events should be noted from time to time to arouse the child's interest and inquisitiveness, but not so as to take away too much class time. The main point is to encourage the habit of watching the world scene daily and to be aware of what is happening in the present as well as in the past, and to be able to notice any relationships. Pupils should be encouraged to keep an

eye out for clippings pertinent to the area that they are presently studying. This is fun, adds interest, and at the same time augments their knowledge.

History and Geography Guidepost

I. Understanding our American Neighbors - 1 week

- A. Location and lands from which they come
- B. Contrasts in climate
- C. Map study, atlas analysis, tools to be used

II. Canada - 10 weeks

- A. Early history and explorers
- B. Atlantic Provinces - 2 weeks
- C. Heart of Canada, Quebec and Ontario - 3 weeks
- D. Prairie Provinces - 2 weeks
- E. Western Canada - 2 weeks

NOTE: Study of structure of British Commonwealth of Nations provides an excellent bridge between domestic, i.e., dominion, and world geography

III. Latin America - 5 weeks

- A. Mexico
- B. Central America, British Honduras, Honduras, Guatemala, El Salvador, Nicaragua, Costa Rica, Panama

IV. West Indies - 3 weeks

- A. General study of area, history and geography
- B. Puerto Rico
- C. Hispaniola
- D. Cuba

V. South America - 14 weeks

- A. The northern countries - Venezuela, Ecuador, Colombia
- B. Countries along the Andes - Peru, Bolivia, Chile
- C. The Silver River Countries - Argentina, Uruguay, Paraguay
- D. Brazil and the Guianas

VI. Vermont - 4 weeks (Excluding local and state government)

It is suggested that an area within each of the above categories be selected for more detailed study. This selection will be left to the teacher. Also to be included in each week's lesson should be a discussion of current events.

Instructional Materials

W.H. Gray, R. Hancock, H.H. Gross, D.H. Hamilton, E.A. Meyers,

Exploring American Neighbors in Latin America and Canada, Follett Publishing Co., Chicago, 1960.

J.W. Nystrom, E.D. Jones, H. Harter, Beyond Our Borders, Canada and Latin America, Rand McNally and Co., N.Y., 1957.

J.R. Borchert, J. McGuigan, Geography of the New World, Rand McNally and Co., N.Y., 1961.

Ruby M. Harris, The Rand McNally Handbook of Map and Globe Usage, Rand McNally and Co., N.Y., 1959.

T.L. Hills and S. J. Hills, Canada, Fideler Co., Grand Rapids, 1960.

H.W. van Loon, The Story of Mankind, Libervight Publishing Corp., U.S., 1951.

V.M. Hillyer, A Child's History of the World, Appleton Century Crofts, N.Y., 1952.

Rand McNally Cosmopolitan World Atlas, Rand McNally and Co., N.Y., 1960.

A Town History of Cornwall, Brattleboro, Vt., 1923.

Rand McNally raised relief map of world and South America

World Almanac

Globe

New York Times

Filmstrips, films

APPENDIX IV

Theoretical Propositions--Science

Science is no more important in the elementary curriculum than say history. It is, however, most important that what is taught is taught accurately. A group of five faculty members at Middlebury College, appointed to review the teaching of science in the elementary school, have come to the conclusion that what is generally taught in science at this level often does more harm than good.

If we are to be accurate in our presentation of science, we must first decide what to teach. The average textbook and teacher's manual recommends that a teacher take up science unit by unit -- weather, electricity, magnetism, etc. We have undertaken a much smaller job; namely to familiarize elementary school pupils with thirty to forty basic concepts. Force, for example, is a concept to be understood. The children read about examples of force, and the teacher guides certain experiments which graphically illustrate force in action. The teacher constantly emphasizes the fact that what the children are learning about this concept is not final but a mere introduction to exciting discoveries they will make in the future. With this presentation a child does not get a fixed or static idea of a scientific concept. Upon entering high school or college, the child experiencing this approach does not have to be untaught and then taught again the basic concepts. Instead he looks forward to a college course which will be an extension of this exciting study. To accomplish this kind of teaching the teacher must use numerous science books and materials.

Instructional Materials

G.O. Blough, J. Schwartz, Elementary School Science and How to Teach It,

Holt-Dryden Press, Henry Holt and Co., Inc., N.Y., 1958.

A.D. Bond, T. Clymer, G.L. Bond, K. Bell, Looking Ahead With Science, Lyons and Carnahan, Wilkes-Barre, 1960.

D. Bradley and E. Lord, Our World of Science, J.P. Lippincott Co., Philadelphia, 1959.

J.D. Barnard, C. Stendler, B. Spock, M. Braidford, J.M. Atkin, Science/Life Series, The Macmillan Co., N.Y., 1960.

Science Kit, Science Kit, Inc., Tonawanda, N.Y.

Films and filmstrips.

APPENDIX V

Foreign Language

A member of the Middlebury College French Department is consultant for the teaching of French. Specialists in foreign language are given the Modern Language Association Guide to assist them in planning. The oral-aural method is used, and classes are taught for thirty minutes each day.

Instructional Materials

Modern Language Assn. Guide. Records.

Postcards, pictures of French life

Mural Map of France

Plan de Paris

Chantons la France

MLA aids prepared by practice teachers

APPENDIX VI

Theoretical Propositions - The Arts

It would seem important that the children of this age be subjected to the world of art in such a way as to bid for their future enthusiasm in the field rather than to develop specific skills. Somehow the notion of respect should be brought into play--respect for the power that art holds over man. The learning of the art skills should not exclude certain chances for free expression.

Children of this age have greater physical endurance and better muscular coordination. Because of this and their increasing maturity, children in grades five and six are able to work longer on a single project. They like to belong to groups in which they are understood and accepted by their peers. Selecting, mounting, and hanging an exhibit of pupils' work is an example of group activity.

These children are more critical of their own achievements. They have a strong sense of realism, and are eager to make pictures look like objects they observe and remember. The teacher should guide children to consider other values--design, color, mood, etc., and to encourage children to be themselves, to be frank and sincere.

It should be remembered that an aesthetic education is the education of those senses upon which consciousness, and ultimately the intelligence and judgment of the human individual are based. Or, as Plato put it, "Art should be the basis of education."

During the pilot stage of this project in specialization a number of fairly good prints were collected--these to be used for display for

demonstration. The materials that one might need for the teaching of the arts are readily available. However, they can only be gotten if the individual in charge of the art program shows the initiative.

APPENDIX VII

Theoretical Propositions -- Arithmetic

The University of Illinois Arithmetic Project expresses in its publications the importance of encouraging children to make their own mathematical discoveries.¹ Experimental classes in grades K-6 have been set up in the Champlain-Urbana public schools. The Project set out to prove that its ideas would be at least as valid as those behind conventional teaching of arithmetic. Findings indicate a higher proficiency in computation despite or because of the introduction of the new content.

The introduction of informal geography is an example of the new content. The arithmetic of taxes, insurance and banking is being replaced to a great extent by content more directly related to the students' immediate experience and needs.

Arithmetic Guidepost

In arithmetic we used the director of the Illinois Arithmetic Project, David A. Page, as consultant. A curriculum outline was submitted to him for comment. An eight-page critique resulted and was most valuable in strength-

¹David A. Page and the Staff of The University of Illinois Arithmetic Project, Number Lines, Functions, and Fundamental Topics (Urbana, Ill.: The University of Illinois Arithmetic Project, 1961), pp. 1-37.

ening the Project's offerings in arithmetic.

I. Review of whole numbers - 4 weeks

- A. Addition of whole numbers using 1-7 digits
 - 1. ability to read and write
 - 2. definition of terms; checking
- B. Subtraction of whole numbers
- C. Multiplication of whole numbers
- D. Division of whole numbers up to three figures in the divisor, zero in the quotient
- E. Work horizontally and vertically with the above operations
- F. Meaning of arithmetic and mathematics
- G. Work problem solving

II. The Number System - 4 weeks

- A. Natural numbers
- B. Integers
- C. Rational numbers
- D. Irrational Numbers
- E. Imaginaries
- F. Roman System up to MN

III. Laws governing arithmetic operation - $1\frac{1}{2}$ weeks

- A. Associative law
- B. Commutative law
- C. Distributive law

IV. Rounding Off (Estimation) - $2\frac{1}{2}$ weeks

- A. Work with whole numbers and later, fractions in addition, subtraction, multiplication and division

V. Manipulation of Fractions - 6 weeks

- A. Conversion of fractions to decimals
- B. Addition of fractions
 - 1. lowest common denominator for unlike fractions
- C. Subtraction of fractions
- D. Multiplication of fractions
- E. Division of fractions
- F. Proper and improper fractions
- G. Word and number problems with above
- H. Tens, hundreds and thousands as fractions

VI. Manipulation of Decimals and Money - 8 weeks

- A. Conversion of decimals to fractions
- B. Tens, hundreds, thousands, millions in decimals
- C. Addition of decimals
 - 1. decimal with a decimal
 - 2. whole number with a decimal
- D. Subtraction of decimals
 - 1. with a decimal
 - 2. with a whole number and a decimal
- E. Multiplication of decimals
 - 1. with a decimal
 - 2. with a whole number with a decimal
- F. Division of decimals
 - 1. with a decimal
 - 2. with a whole number with a decimal
- G. Number and word problems with above
- H. Percent, meaning as a comparison, finding problems
- I. Problems of averages
- J. Factoring
- K. Money problems, reading tables and scales
- L. Business arithmetic
 - 1. earning, saving, spending
 - 2. balancing accounts
 - 3. keeping budgets, bill forms receipts
 - 4. general banking practices

VII. Ratios - 3 weeks

- A. Form meaning as an expression of rate and comparison
- B. Methods for solving
- C. Work problems with ratios
- D. Rate times time times distance relationships

VIII. Introduction to Geometry - 3 weeks

- A. Plane figures - work with perimeters and areas
- B. Solid figures - work with volume and surface
- C. Scale drawings
- D. Review of measures of rods, acres, squares

IX. Introduction to Elementary Algebra - 3 weeks

- A. Meaning of equations
- B. Operations on the equations
- C. Concept of exponents
- D. Graph work with equations
- E. Types of graphs - bar, line and circle

X. Inequalities - 1 week

- A. Signs
- B. Meaning
- C. Problems in inequalities

XI. Theory of Sets - 2 weeks

- A. Arithmetic and geometric progressions

Instructional Materials

M.L. Hartung, H. Van Engen, C. Mahoney, Seeing Through Arithmetic, Scott, Foresman & Co., Fair Lawn, N.J., 1957.

R.L. Morton, M. Gray, Making Sure of Arithmetic, Silver Burdett Co., Morristown, N.J., 1958.

J.R. Clark, C.W. Junge, C.H. Clark, Growth in Arithmetic, World Book Co., N.Y., 1957.

National Council of Teachers of Arithmetic, Instruction in Arithmetic, Twenty-Fifth Yearbook, NCTM, Washington, D.C., 1960.

D.A. Page, "Arithmetic with Frames," University of Illinois Arithmetic Project, Urbana, Ill., 1961.

D.A. Page, "Do Something About Estimation," University of Illinois Arithmetic Project, Urbana, Ill., 1960.

Math Wheel - Milton Bradley Co.

Geometric Figures and Solids - Milton Bradley Co.

Study of Graphs - Milton Bradley Co.

Fractional Parts - Milton Bradley Co.

Number Board - J.C. Winston Co.

Cuisenaire Rods, Cuisenaire Corporation of America

APPENDIX VIII

Theoretical Propositions - Language Arts

The individualized approach to reading has influenced our thinking in the area of Language Arts. We differ from Jeannette Veatch in that we insist that children do not have innate good taste in books and thus must be guided by a skilled teacher in making book selections.¹

The fact that reading can be enjoyable should be stressed above all other incentives for reading. Once a child becomes truly interested in reading good books he is well on his way to being able to master the skills of reading for accuracy, information and inspiration. The child can and should enjoy the pursuit of all these skills.

We do not use the basal reader in a basal way. It is one of many source materials. The exclusion of the formal use of the basal reader does not constitute a de-emphasis of study or word attack skills. Its use is limited because of its uninspiring, poorly written, vocabulary-controlled content.

Children's literature will be offered to the better readers. It is the purpose of our course in children's literature to expose these pupils to the best in children's literature. We hope that this will develop in them an insatiable desire for good books and that reading will forever be to them a source of joy, inspiration and information.

The teacher will thoroughly introduce all books to be read. Although oral reading will play a minor role in these classes, the first chapter or two of a book might be read aloud in class as part of the introduction. Discussion

¹Jeannette Veatch, Individualizing Your Reading Program (New York: G.P. Putnam's Sons, 1959), pp. 6-18.

will play a large role in these classes. Vocabulary building will be done by gaining meanings of words in context.

All children will participate in an organized library program. Time will be set aside each day for silent reading. The teacher will guide the children in book selection, paying close attention to variety, quality and appeal. The teacher will confer individually with children about their reading and keep a careful record of what is read. Oral reports, reading aloud and dramatizations are techniques the teacher may use to encourage the children to share the content of books.

We believe that language arts is the most important single area at the elementary level, for its mastery will have great bearing upon the understanding of social studies, arithmetic and science. Each of these subject areas in turn must assume responsibility for developing language skills.

The main responsibility for teaching language arts does fall upon the language arts specialist. In the general area of written and oral communication it is essential that the child understand the structure of the language to a degree that will insure the ability to speak, write and listen well. These represent the tools for effective communication; only when they are mastered will the child be able to present his ideas with clarity.

Instructional Materials

M.A. Dawson, B. Scales, Language for Daily Use, World Book Co., Yonkers, 1953. This is used as a text.

T.C. Clark, J.H. Straub, Sharing Ideas, The Macmillan Co., N.Y., 1960.

J. Veatch, Individualizing Your Reading Program, G.P. Putnam's Sons, 1959.

Paper Bound Books in Print, R.R. Bowker Co., N.Y., 1961.

E.N. Wood, M.W. Barrows, Reading Skills, Henry Holt and Co., N.Y., 1958.

N. Larrick, A Teacher's Guide to Children's Books, Charles E. Merrill, Inc., Columbus, O., 1959.

A.T. Eaton, Treasure for the Taking, The Viking Press, N.Y., 1957.

E. Parker, ed., One Hundred Story Poems, Thomas Y. Crowell, N.Y., 1951.

M. Meighen, M. Pratt, M. Halvorsen, Phonics We Use (A-F), Lyons and Carnahan, Wilkes-Barre, Penna., 1957.

Sets of Children's Literature (partial list)

Baum, The Wizard of Oz

Carroll, Alice in Wonderland

Cooper, The Last of the Mohicans

Fenner, Ghosts, Ghosts, Ghosts

Forbes, Johnny Tremain

Grahme, The Cambridge Book of Poetry for Children

Green, Robin Hood

Tales of Greek Heroes

Kipling, Captains Courageous

The Kipling Sampler

Lang, Arabian Nights

London, White Fang

Nordhoff and Hall, Mutiny on the Bounty

Poe, Great Tales and Poems of Edgar Allan Poe

Sewell, Black Beauty

Spyri, Heidi

Stevenson, Kidnapped

Treasure Island

Tolkien, The Hobbit

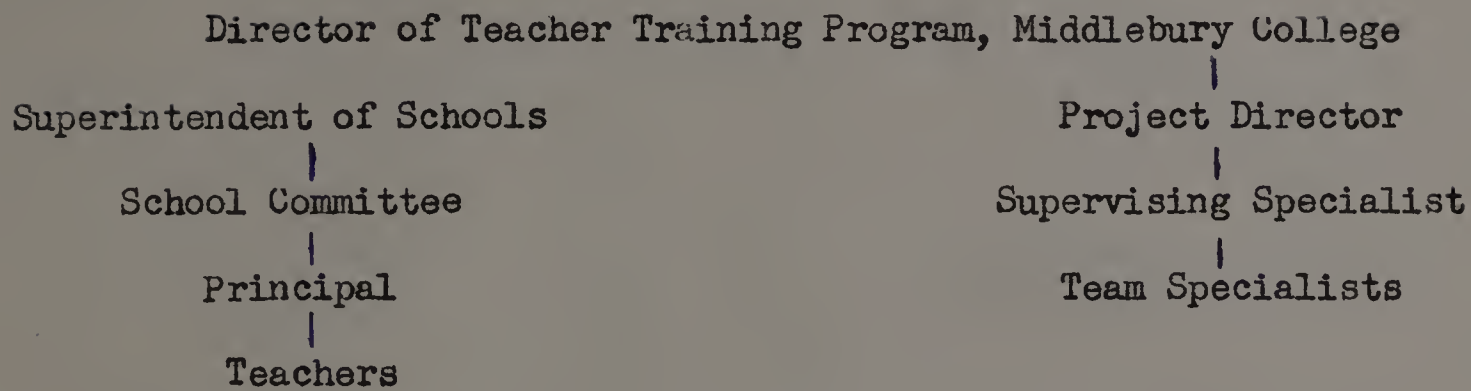
Twain, The Portable Mark Twain

Verne, The Mysterious Island

Wyss, Swiss Family Robinson

APPENDIX IX

ORGANIZATION OF MIDDLEBURY-CORNWALL PROJECT



APPENDIX X

Contact and Observation Hours per week

	<u>Contact Hours</u>	<u>Observation Hours</u>	<u>Seminar Hours</u>
Language and Reading	7	5	2
Arithmetic	5	7	2
History and Geography	5	7	2
Science	5	7	2
Art	2	-	2
Homework, Reading, Special Help	4		
Spanish	$2\frac{1}{2}$	-	2

APPENDIX XI

Comments of Parents

I hope and trust it can get over the "pilot" phase and become the regular and continuous program.

.....

I am just sorry that it wasn't initiated three years ago when Thorp needed some close attention. For two years he spent most of his time stoking the school stove. I am frankly worried about his spelling and arithmetic and what staying behind will mean to him.

.....

I think that you are doing a good job, and think that my son is doing better.

.....

I would like to say that as far as my children were concerned it was a very good experience in learning.

.....

I believe this Project has been a tremendous success and that everyone concerned should have a vote of thanks.

.....

To be honest, I am very much in favor of this Project.

APPENDIX XII

Comments by Team Specialists

At the end of their practice teaching, team members who participated in the pilot phase of the Project wrote lengthy statements of evaluation.

I will first consider those aspects of the Project which I think were especially outstanding. They are specific points included in a program which on the whole provided an excellent training ground for a potential teacher.

The class was wonderful to know, but beyond that the pupils were wonderful material for a practice teacher to work with. Having had misgivings about teaching such a small group, I was pleased to discover that the class was heterogeneous. This cross section certainly provided a challenge which we will undoubtedly encounter as professionals. As a science teacher, finding whole new depths and probing new areas, I found an added challenge not only in training the pupils' minds along new lines, but also in stimulating interest, curiosity and observation.

Teaching science exclusively is another aspect of the project which, I know, was most beneficial to me personally. This has been an invaluable experience in so far as I was required to digest, organize, and present subject matter. Other features of the program which were most helpful: The supervisor's patience and help proved invaluable. She provided excellent criticisms and displayed a great interest in virtually every detail both in lesson material and teaching techniques. Specific suggestions applied to situations which could be pin-pointed were most effective aids. All of these, added to the supervisor's availability for consultations were a great advantage and benefit to those of us teaching at Cornwall.

.....

The Cornwall experiment in team teaching has proved, in my opinion, a potentially ideal practice teaching experience. Although there are many problems to be ironed out, I would not hesitate to express my utmost confidence in the continually increasing success of such a Project. I take this stand because I feel that the experiment contained the kernel and that which to me is teaching in its truest sense. The practice teacher feels that every moment that her very talent, interest, and personal belief are being utilized to the utmost. Although the subject matter can be treated objectively it is this personal quality of enthusiasm and interest created by the freedom of the situation which makes teaching alive and vital.

The initial plunge into a classroom of strange children, while it is somewhat frightening at the time, is an experience far better

to face for the first time under guidance than in an actual on-the-job situation. The fact that no observing is involved prevents preconceived notions of the children's abilities.

.....

Since everyone in the Cornwall team teaching program had a different schedule, I will discuss my opinions of the program from the viewpoint of an art education teacher. In a word, I would definitely call the program a success and feel very fortunate to have been able to have taken part in it. The cooperative attitude of the children was most appreciative, and the interest and advice, and criticism of the Project Director, classroom supervisor and my consultant were invaluable.

If possible, I would someday like to see a closer relationship between the Teacher Training Program and other college departments as typified by the Language Departments in establishing programs for teaching credit in specialized fields. Possibly this could be done in an individual program such as a fifty project. The two to three hour Wednesday night workshop with my advisor was an excellent opportunity to discuss problems and ideas and to experiment with new techniques.

APPENDIX XIII

Comments by State Helping Teacher

My visit to the sixth grade class in Cornwall was most pleasant and interesting. I am glad to hear that the efforts of this Project are proving to be successful.

Most of my time was spent in reading lesson plans of the student teachers. They appeared to be very well done. Lesson plans are but statements of ground to be covered. The plans I read were more than this. As an example, I noticed that the science plans referred not only to the orbits and order of the planets, but why the planets stayed in orbit. This same reference to "why" was noted in other plans as well. The newspaper done by Miss Freeman was also of interest. I trust that if I show this publication to other teachers it will not be a violation of the copyright. I should imagine that much learning took place during this preparation period.

During Miss Freeman's language lesson several very good penetrating questions were asked by the students. Some, I believe, were prepared to argue their case. English grammar

is not something sixth graders feel very strong about, at least not strongly enough to argue. The use of advertising material to teach the lesson was also good to see.

BIBLIOGRAPHY

Books

- Eaton, Anne T. Treasure for the Taking. New York, The Viking Press, 1957.
- Fenner, Phyllis. The Proof of the Pudding. New York: The John Day Co., 1957.
- Hunnicutt, C.W. and Iverson, W.J. Research in the Three R's. New York: Harper and Brothers, 1958.
- James, Preston E. New Viewpoints in Geography. Washington: National Council for the Social Studies, National Education Association, 1959.
- Keppel, Francis, Personel Policies and Public Education. Horace Mann Lecture, University of Pittsburgh, 1961.
- Larrick, Nancy. A Teacher's Guide to Children's Books. Columbus, O.: Charles E. Merrill Books, 1960.
- Read, Herbert. Education Through Art. New York: Pantheon Books, Inc., 1958.
- Stoddard, George D. The Dual Progress Plan. New York: Harper & Bros., 1961.
- Veatch, Jeannette. Individualizing Your Reading Program. New York: G.P. Putnam's Sons, 1959.

Reports

- Auburn, Maine, Department of Education, Team Teaching: A Report of The Pilot Team, September, 1960.
- Bair, Medill. Team Teaching. Lexington, Mass: Lexington Public Schools, 1961.
- Brownell, John A., The Claremont Teaching Team Program, Claremont, California, 1961.
- Norwalk Plan Coordinating Committee, Team Teaching at the Fox Run Elementary School, Norwalk, Connecticut, 1961.
- Middlebury College. Report to the Ford Foundation, 1960-1961. Middlebury, Vt.: Middlebury College Teacher Training Program, 1961.
- Middlebury College. Revised Recommendations of Educational Policy Committee to the Faculty re Teacher Training Program. Middlebury, Vt.: Educational Policy Committee, Middlebury College, 1959.

Norwalk, Conn. Board of Education. The Norwalk Plan: A Study Designed to Establish New Careers for Teachers. Norwalk, Conn.: Board of Education, 1959.

Trachtman, Gilbert M. The Dual Progress Plan in Long Beach. Long Beach, N.Y.: City School District of the City of Long Beach, 1960.

Articles and Periodicals

Anderson, Robert H. "Team Teaching," Saturday Review (May 20, 1961), pp. 52-54.

_____. "Team Teaching in the Elementary School: Report on a Massachusetts Experiment," The Education Digest (November, 1959), pp. 26-28.

_____. "Three Samples of Team Teaching in Action," The Nation's Schools (May, 1960), pp. 62-65.

_____. Hagstrom, Ellis A., and Robinson, Wade M., "Team Teaching in an Elementary School," The School Review (Spring, 1960), pp. 71-86.

Brownell, John A. and Taylor, Harris A. Theoretical Perspectives for Team Teaching," Phi Delta Kappa (January, 1962).

Cunningham, Lawrence L. "Team Teaching: Where do we stand?" Administrator's Notebook (April, 1960).

Flemming, Robert S., Hurley, Beatrice, Keliher, Alice V., and Manolakes, George. "Reaction to the Dual Progress Plan," Educational Leadership, (November, 1960).

"How to Introduce Team Teaching in Your Elementary Schools," School Management, (November, 1961).

Ohm, Robert D. "Toward a Rational for Team Teaching," Administrator's Notebook, (March, 1961).

Shaplin, Judson T. "Team Teaching," Saturday Review, (May 20, 1961).

Trump, J. Lloyd and Baynham, Dorsey. Guide to Better Schools: Focus on Change. Chicago: Rand McNally and Co., 1961.

Woodring, Paul, and others. "Education in America -- an L.R. Supplement," Saturday Review, "September 17, 1960).

Pamphlets

Ford Foundation. Time, Talent and Teachers. New York: Ford Foundation, 1960.

Morse, Arthur D. Schools of Tomorrow -- Today. New York: Doubleday and Co., 1960.

Page, David A., and the Staff of the University of Illinois Arithmetic Project. Number Lines, Functions, and Fundamental Topics. Urbana, Ill.: The University of Illinois Arithmetic Project, 1961.

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