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ABSTRACT

This document discusses the Quincy Public Schools' 10 components for a student centered learning system with special reference to career education and with the help of a systems approach chart, an outline of the design for the system, and a career education model. The appendixes include a staff development workshop outline and a list of implementation tasks. (NH)

DRAFT

DISCIPLINE RELATED CAREER EDUCATION PROGRAM

3-Year Model for the North Quincy High School District,
Quincy Public Schools, Quincy, Massachusetts

January 1974

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THE

STUDENT CENTERED LEARNING SYSTEM

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September, 1973

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TABLE OF CONTENTS

	Page No.
Preface	i
Introduction	3
Acknowledgments	9
Systems Approach Chart	10
Components of the Student Centered Learning System	11
Outline of the Design of the Student Centered Learning System	12
Goals of the Quincy Public Schools	13
Behavioral Projections	14
Career Education Program Objectives Related to Behavioral Projections	15
Rationale for Career Education	18
Comprehensive Concepts of Career Education (Prelim.)	19
Specific Performance Objectives - Career Education (Prelim.)	20
Diagnostic and Evaluative Tools and Procedures (Prelim.)	21
Student Learning Activities (Prelim.)	22
Appropriate Media (Prelim.)	23
Classroom Management System (Prelim.)	24
Self-learning Environment (Prelim.)	25
Career Education Model (Figure I)	26
Career Education Model (Description)	27
References	
Appendixes	

There is an old Buddhist simile that states:

"Words are like fingers pointing to the moon. Cling to the finger and you'll never see the moon."

The thought contained here is applicable to the millions of words that follow (as well as for the millions yet to come) in this still incomplete edition of the Student Centered Learning System.

SCLS is a deliberate and conscious effort undertaken by Quincy educators to identify, develop and implement a system of education that is learner responsive. However, like education itself, the Student Centered Learning System has no ends of its own; it has no single body of knowledge that is to be transmitted to everyone in accordance with a singular grand design; it is not simply a statement of philosophy; it is not a learning theory; nor is it doctrinaire, dogmatic, or authoritarian.

If it is not all these things, then what is it? It is a procedural guideline for the development of a learner-responsive school system. It is a set of checkpoints against which any proposed learning experience can be measured. It is a framework for incorporating the many diverse needs and skills of self-actualizing teachers and students. It is a design for making clear our continuing development along the path of our national heritage "E. Pluribus Unum"-"Out of many, one."

The concept of a Student Centered System is not new and in fact it is to some extent the same old wine in new bottles. The Student Centered Learning System is highly compatible with the Quincy Method. And, the Quincy Method ought to be viewed at least as a synthesis of a pragmatist-existentialist view of learning that recognizes the importance and, indeed, compatibility of theories of learning such as conditioning theory and cognitive field

theory as those theories are reflected in the teaching-learning process.

While the Student Centered Learning System can be described as a systematic approach at defining and implementing the Quincy Method it is not the fruit of a preconceived systems approach. The development of what has been happening in Quincy can not be traced on a PERT chart, there is no visible critical path, it is not the product of a mangement information system and to repeat nor is it the systematic application of a systems approach.

It is true that Systems, Systems Approach, PERT, Critical Path and Management Information Systems concepts have all played a role in bringing Quincy to where it is today, but a blue print, a set of prepared pre-determined plans has neither been followed nor is available.

The words used in the SCLS in promulgating the goals, behavioral projections, rationales, and comprehensive concepts for each discipline, as well as the hundreds upon hundreds of general, intermediate, and specific performance objectives, should be looked upon as fingers pointing to the moon of self-fulfillment realized by each individual as he comes to know.

By no means does this newest edition of the SCLS complete our work. What follows is an up-date of the first four steps published in 1971, as well as the addition of step five. During the summer of 1973 approximately 50 Quincy classroom teachers from all grade levels and subject areas worked along with IPT members in order to come up with our first publishable effort at step five. All of us are in the debt of those who worked so diligently this past summer.

In closing I would once again like to call attention to a point made by me in my preface to the 1971 edition of the SCLS.

In order for SCLS to become learner responsive we as educators have an inescapable responsibility to learn as much as we possibly can about how man - *each Johnny and each Mary* - comes to know. We need to become students of learning theory. We need to consider such questions as: What is the basic nature of man, and of reality? How does learning take place? Does man control what he learns or is learning controlled by a force or forces external to himself? How can we best learn about learning - through introspection, reason, observation, or experimentation ? What have the great minds of the past, as well as those who are contributing today, said about learning?

It occurs to me that our knowledge in this area is very rudimentary; however, the responsibility of coming to know is ours.

Lawrence P. Creedon

August 17, 1973

INTRODUCTION

For the past several years a considerable number of educators associated with the Quincy Public Schools have been involved in some of the most significan efforts to improve public education in the United States. An alphabetical listing of some of these projects will suffice to indicate the breadth of this involvement, e.g. ABLE, COPED, DEEP, ISCS, MACOS, nACH, PLAN and Q-PED. We have also been involved in two other national efforts, the ES'70 network and the Model Schools network. In addition, individual teachers have been expending much energy to make the learning environment more and more responsive to the needs of individual students.

Three and one half years ago the Instructional Planning Team began dialoguing on how we would expand the Systems Approach Chart so that all personnel within the Quincy Public Schools could coordinate these many efforts into a learning system that was better than any of its parts. The purpose of such a system would be to enable us to cull the best from any single instructional program, incorporate the successful devices that are old and include the promising methods that are new, and enable all 1,000 of us to begin to focus our efforts on a systematic, coherent plan for improved education for all the young people we serve.

At this stage of development the Student Centered Learning System focuses upon the cognitive and psychomotor areas. When this design is fully developed and the system is responsive to each student's needs in these areas, it should enable the teachers and students to have more freedom to develop growth in the affective area - an area that has few models for us to follow at this time.

(The Quincy Public Schools is firmly committed to developing the affective domain as part of the learning environment for Quincy's young people.) It is our purpose to contain within the ten components of the design all the elements of a sound learning system.

The First Five Components:

The initial development of the first five (5) components is the prime responsibility of the discipline coordinators. These components are:

1. Goals of the Quincy Public Schools
2. Behavioral Projections
3. Rationale for the Discipline
4. Comprehensive Concepts of the Discipline
5. Objectives -- General
   Specific Performance

1. Goals of the Quincy Public Schools

The goals are the overarching three listed in the Output section of the Systems Approach Chart.

2. Behavioral Projections

The behavioral projections represent our attempt to predict the life styles that will be needed by our students in a rapidly changing society. All our programs must be assessed in light of their contributions to these behaviors.

3. Rationale for the Discipline

At the moment the disciplines of knowledge compiled by man over time represent a legitimate starting point for helping young people develop these types of behavior. Nevertheless, a rationale for each discipline has been developed to indicate its relevance in the lives of students.

4. Comprehensive Concepts

Given the rationale, we must then not only help each youngster to come to know the discipline and its relationship to the behavioral projections but also provide him with the concepts and skills of the discipline so that he can, throughout his lifetime, continuously discover and interact with new knowledge in this area. In order to help him do this we concur with Bruner's notion of delineating the concepts that form the structure or skeleton of each discipline. (Later, these concepts may well form the basis for our next major curriculum effort.)

5. Objectives

From these comprehensive concepts we have developed general objectives that comprise each concept. This has been done in order to outline all the sub-topics contained in each concept.

In the past many teachers have been forced to progress through a graded sequence with just the basic textbooks as their sole guide and tool. To cope with this limitation we are in the process of generating, from the general objectives, specific performance objectives in the skill and cognitive areas. With such a criterion-based continuum as the instructional program, a teacher will be able to help each youngster progress continuously toward the behavioral projections by devising learning activities and matching them with a wide variety of media. The student will then be able to take part in building his own program of studies consistent with his goals and aspirations and utilizing the media most appropriate for his learning style.

The Last Five Components

The initial development of the last five (5) components is the prime responsibility of the principals and teachers, for these are areas where they work daily. (You will note we used the word prime, not sole, for obviously all ten components are a mutual responsibility of all educators in Quincy.)

These components are:

6. Diagnostic and Evaluative Tools and Procedures
7. Student Learning Activities
8. Appropriate Multi-Media
9. Classroom Management System
10. Self-Learning Environment

At the present time within the Quincy Public Schools there are many good models of each of these components that have been developed by our teachers. These must be identified, clarified, and developed to the point that they can be easily adapted by other teachers.

6. Diagnostic and Evaluative Tools and Procedures

In order to place each student at the instructional level where he can successfully meet his needs, we need to diagnose his strenghs and weaknesses in terms of the curriculum. Good teacher-made and commercial diagnostic tools and procedures need to be collected, assessed, and shared.

7. Student Learning Activities

Student learning activities are known by a number of terms, such as, contracts, worksheets, TLU's, LAP's, and UNIPACS. These learning activities, designed to stimulate doubt in the mind of the learner, need to be collected, assessed, and shared.

You will note that the degree of specificity of the written objectives listed under Specific Performance Objectives is not intense. This has been done purposely in order that the teacher will have the opportunity to make it more specific by devising learning activities after guidance and planning with each student in terms of his needs, interests, competencies, and abilities.

8. Appropriate Multi-Media

As we continue to develop sophisticated techniques for identifying the ways in which an individual learns best, we need to make certain the media that best helps him to learn has been so identified and is available.

9. Classroom Management System

Keeping track of a custom-built program of studies for each student requires a classroom management system that is workable. Teachers working in Project ABLE and Project PLAN have built models. In addition a number of individual teachers have devised such systems. These need to be collated, assessed and shared.

10. Self-Learning Environment

The foundation upon which all these efforts rest and therefore the most important component is a self-learning environment, in each classroom and in each school, that is responsive to the needs of our students. This environment might be characterized as one that is personalized, friendly, supportive, accepting, humane, and challenging, both for the student and the teacher.

There are two other components that have not been included in our list but are implied and understood as being part of the learning system. These are individual student-teacher guidance and planning and staff development.

Conclusion

These ten (10) components comprise a learning system that will enable each of us to work together in building the best instructional program available.

This particular edition of our curricula is a prototype much like the Wright Brothers' first airplane. We recognize there are missing objectives, and some of the objectives are not as refined as we would like. However, over the next several years we intend, with your help, to add to it, refine it, and revise it so that it becomes, by comparison, a 747 airplane.

Join us!

William L. Phinney

September, 1973

CREDIT PAGE

It is appropriate that an attempt to put together a system of learning draw from system-wide resources. It is appropriate also that the efforts of other systems in curriculum development be considered and used as appropriate. Both considerations were catered to during the three-week work session in the summer of 1973. The documents and people from around the country from whom we borrowed were: Project PLAN; University of Massachusetts Objectives Bank; Downers Grove, Illinois; Instructional Objectives Exchange, California; Nova Schools, Florida; National Science Teachers Association; Clark County, Nevada; St. Bernard's Parish, Louisiana; Joint Council on Economic Education; Indiana State University; ERIC; Tufts University; Merrimack Educational Center, Massachusetts; Mesa Public Schools, Arizona; Brockton, Massachusetts; California Test Bureau (PRI); Massachusetts State Department of Education; and past efforts of Quincy teachers. Credit to the system people is the purpose of this page.

The curriculum task force of main office and teaching personnel who spent three weeks in the Quincy High School learning center are to be highly commended. The session was characterized by diligent work, honest questioning, on-the-spot problem solving, and sincere commitment with promises of follow-up. For a professional approach to such a monumental task, the following deserve recognition:

Teachers

Nicholas Anciello
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Consultants

Francis W. Keegan
Jean Ann MacLean

Credit Page, continued

To: All those who worked in the development of the Quincy Public Schools Systems Approach Chart, and the Quincy Public Schools Student Centered Learning System, particularly the members of the Instructional Planning Team and the Learning Management Team, and the teachers; and to sources from around the nation.

For this proposal for Career Education, credit is given to:

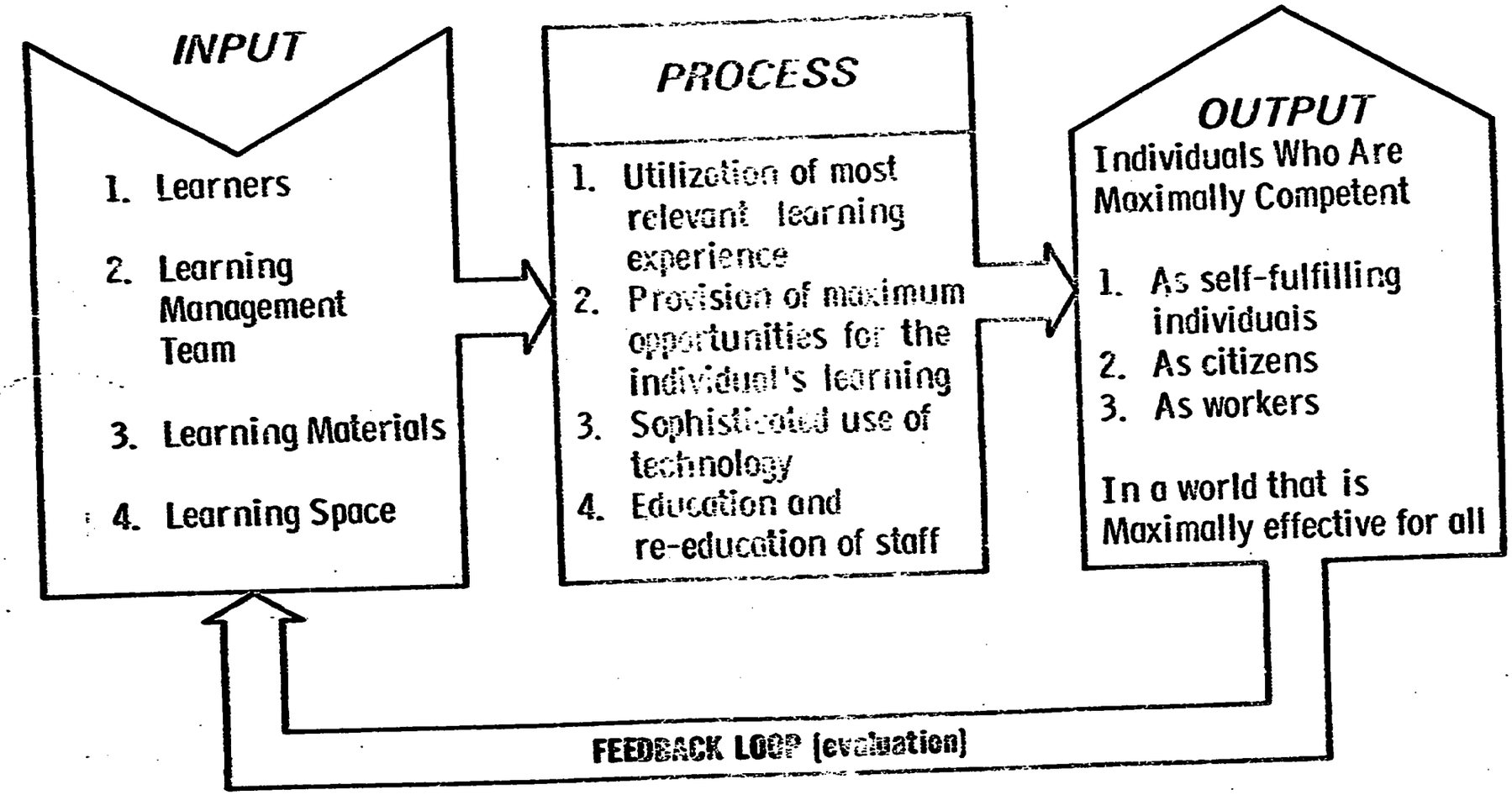
Maurice J. Daly, Assistant Superintendent of Schools for Occupational Education

Arthur S. Woodward, Coordinator of Secondary Schools

Frank N. Leporini, Research Assistant for Career Education

SYSTEMS APPROACH

EDUCATIONAL SYSTEMS FOR THE SEVENTIES



COMPONENTS OF
THE STUDENT CENTERED LEARNING SYSTEM

1. GOALS OF THE QUINCY PUBLIC SCHOOLS

2. BEHAVIORAL PROJECTIONS

3. RATIONALE OF DISCIPLINE

4. COMPREHENSIVE CONCEPTS OF DISCIPLINE

5. OBJECTIVES - General
   Specific Performance

6. DIAGNOSTIC/EVALUATIVE TOOLS AND PROCEDURES

7. STUDENT LEARNING ACTIVITIES

8. APPROPRIATE MULTI-MEDIA

9. CLASSROOM MANAGEMENT SYSTEM

10. SELF-LEARNING ENVIRONMENT

OUTLINE OF THE DESIGN FOR THE STUDENT CENTERED LEARNING SYSTEM

The following components are a translation of the three dimensions of the Quincy Public School's Systems Approach Chart. They are presented as an aid in helping staff to determine the action steps needed to achieve the goals of the Quincy Public Schools.

ONGOING FEEDBACK & EVALUATION OF SUBSYSTEMS

1. Goals	⟷	Community Responsibility - Relevance Analysis	⟷ ES'70 Output
2. Behavior	⟷	Projections based on behavioral analysis and such goals as defined by ASCD, Committee of 10 & the National Council of Social Studies	⟷ ES'70 Output
3. Rationale	⟷	Reason for including a discipline in our program of studies	⟷ ES'70 Process
4. Concepts	⟷	Comprehensive ideas that constitute the structure of a discipline	⟷ ES'70 Process
5. Objectives	⟷	General Objectives of the concepts Specific Performance Objectives All balanced by the cognitive and psychomotor domains Provisions made for affective growth	⟷ ES'70 Process
6. Diagnostic & Evaluative Tools & Procedures	⟷	Use of validated tests of abilities, aptitudes, and achievement	⟷ ES'70 Input & Process
7. Student Learning Activities	⟷	Designed to stimulate doubt & need, thus based on relevance analysis	⟷ ES'70 Process
8. Appropriate Multi-Media	⟷	Designed to help students reach SPO's by relating media to appropriate specific learning styles	⟷ ES'70 Input & Process
9. Classroom Management System	⟷	Procedures for recording student progress & for managing learning experiences	⟷ ES'70 Process
10. Self-Learning Environment	⟷	Identification & nuturing of individual styles of learning	⟷ ES'70 Input, Process & Output

ONGOING FEEDBACK & EVALUATION OF SUBSYSTEMS

Rationale - Career Education

Career education is a need of our young people who face complex educational and technical problems, and conditions in society, which require well ordered educational goals and plans and career goals and plans.

> "In an interdependent technological society, the development of competence to produce a fair share of commodities and services is a major objective of any realistic educational system. So is the development of ability to earn income. Competence to pursue civilized leisure and to fulfill the general obligations of responsible citizenship are equally important and closely interrelated objectives.
>
> "Emerging concepts of 'career education' can be viewed as one basic part of the process by which an educational system pursues all of those objectives. Clearly, work and the products of work help make life satisfactory. Such work in itself can be psychologically rewarding. Useful work can also help people fulfill a major portion of their civic obligations. Income derived from work can enlarge opportunities for individuals and their families to enjoy leisure. Adequate income also enhances individual self-respect and provides opportunities to consume fair shares of the commodities and services produced by fellow citizens."(21)

Career education, integrated with all the other disciplines within the procedural guideline of the Student Centered Learning System, will help students prepare themselves for maximum competency as workers, fulfilling needs in that dimension of the Goals of the Quincy Public Schools, along with incorporated efforts in other disciplines toward maximum competency as individuals and citizens.

Comprehensive Concepts - Career Education

Comprehensive concepts are being synthesized from such sources as:

The Model (see Fig. I)

Project ABLE

Project CAREER

State Department of Education

World of Business

World of Manufacturing

American Industries

Business Education - Quincy Public Schools

Current Quincy Public Schools Programs that are applicable

Tuckman, Rutgers University

MISOE - ESCOE

16 Occupational Clusters (see Model, Fig. I, and page 29)

and are to be integrated with the other combined Quincy Public Schools disciplines for development and tests of Relevancy in our Relevancy Forums; our discipline areas combined into Dwight Allen's four areas of:

Communications

Aesthetics

Technology

Human Relations (see Model, Fig. I)

Specific Performance Objectives - Career Education

See comments regarding Comprehensive Concepts, previous page.

Specific Performance Objectives are being spelled out for each Comprehensive Concept and related (by number) back to Behavioral Projections (see sources listed for Comprehensive Concepts).

The Career Education Specialist will be meeting individually with each Discipline Coordinator. Together they will analyze the General Objectives and Specific Performance Objectives of each discipline, and those General Objectives and Specific Performance Objectives of Career Education, and will integrate both areas for emphasis on Career Education.

Diagnostic and Evaluative Tools and Procedures

Reference is made to the testing Handbook, by Miss Louise Forsyth of the Quincy Public Schools Test Resource Center.(26)

The Career Education Specialist, working with Miss Forsyth, will review and evaluate available tests for aptitudes, attitudes, abilities, and achievements at the various levels addressed in the Model.

These tests will be piloted, and useful ones will be used with the intent to bring a diagnostic and prescriptive capability for the integration of Career Education into the learning process.

Student Learning Activities

Resources listed in the Comprehensive Concepts and Objectives sections of this paper will be drawn upon.

Input from diagnostic and evaluative testing will be used in designing learning activities commensurate with the level in which a student is (i.e. elementary) and with his or her particular learning needs.

The learning activities will be so prescribed, using the Specific Objectives (Component 5) to help the learner toward internalization of the concept(s), consistent with the Behavioral Projections which have been interrelated with the Career Education program objectives.

The macro visuals that Mr. Leporini is developing will be aids in developing student learning activities.

The Career Education Specialist will head this effort, working with teachers in the buildings, after the initial in-service has been completed.

Appropriate Media

Use and application will be determined by:

1. The learning style(s) of each learner. (Component #6).
2. The specific objective to be mastered. (Component #5).
3. The learning activities developed (Component #7).

Classroom Management System - Career Education

There are management systems that have been developed locally which the Career Education Specialist and in-building people will explore, both on-site and in staff development workshops.

Revisions of existing models or systems are anticipated, as curriculum and instructional activities are developed.

It is expected that the macro visuals that are being produced by Mr. Leporini will serve as one basis for development of viable classroom management system(s), along with other instructional management needs that are to be evident as curriculum is implemented.

Attention is called to the paper by Arthur S. Woodward entitled: "Progress And Reporting/Student."(27) This will be a guide to us as we work on this component.

Coding systems will be in line with the one that has been worked out for the other disciplines with Quincy Public Schools Data Processing Division.

Self-learning Environment - Career Education

Please refer to Item 10 in the Introduction, by Mr. William L. Phinney.(28)

It is intended that Career Education will round out the personalized, friendly, supportive, accepting, humane, and challenging environment for both students and teachers - helping each learner attain his maximum competency as stated in Quincy Public Schools Goals by application of the Process Dimension of the Systems Approach Chart.

Further amplification is required on this, as further development of factors of affective concerns are completed.

CAREER EDUCATION MODEL

CAREER EDUCATION MODEL

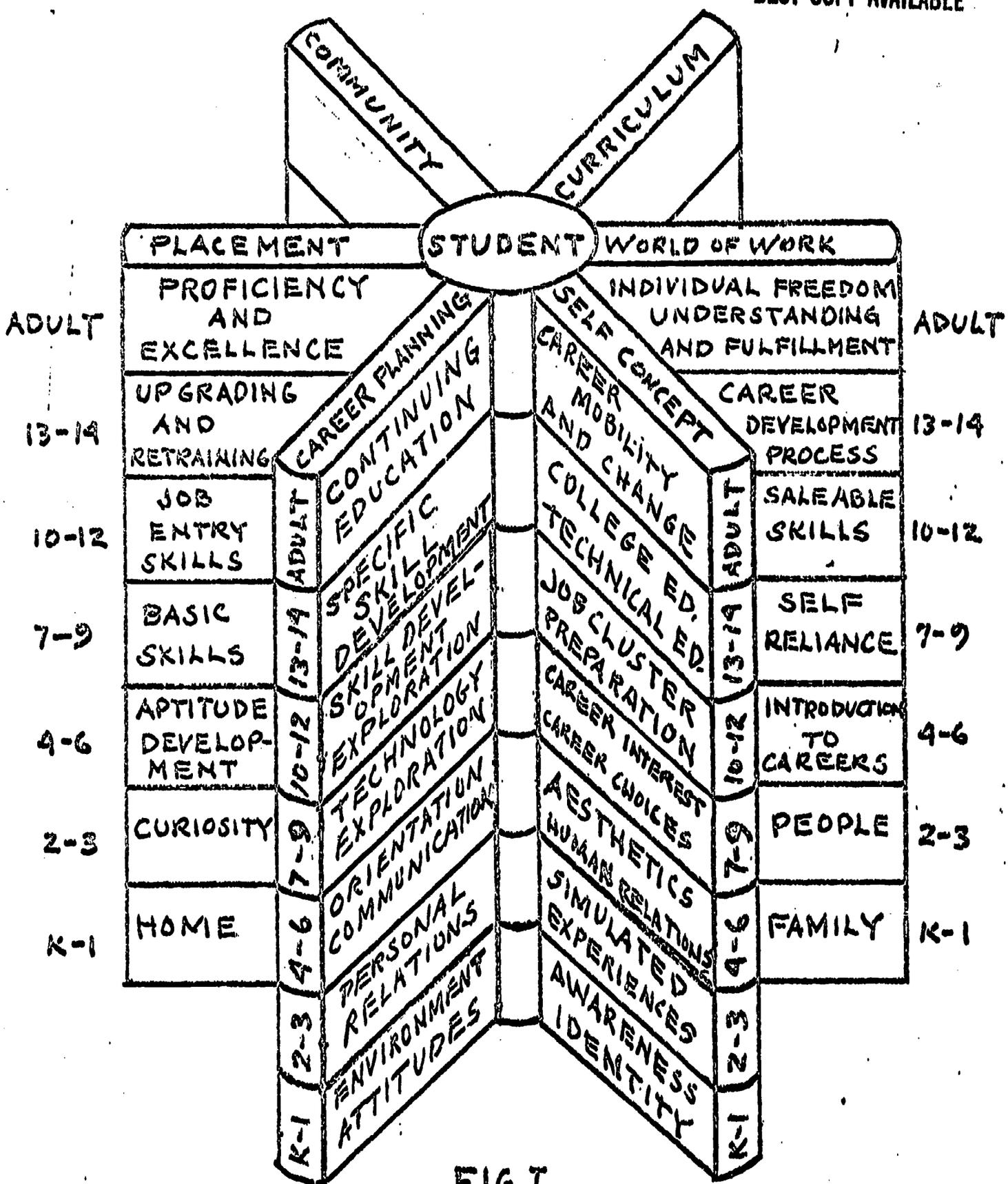


FIG I

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Career Education Model

A recent report on the Educational Goals for Massachusetts states:

> "Education should provide the learner with the skills, experience and attitudes, and the guidance for initial job placement; it is equally important for the learner to develop a capacity to adapt to changing conditions."(22)

This Goal, expanded, is: Students graduating from educational programs should have the basic skills required of an adult for self-sufficiency in today's world. These basic skills must be complemented by an attitude for responsible and careful completion of assigned jobs. Schools at the secondary level should ensure that students obtain one or more job offers after graduation. In preparing students for employment upon graduation, schools should not focus students artifically on only one job, but rather, they should maintain a program which allows flexibility and alternative job choices. Specifically, school systems can develop programs which ensure student employability by starting new programs in areas where new employment opportunities are being created by new technologies and equipment, and by eliminating programs where the decline of the job opportunities has become significant. In summary, school programs should provide the opportunity for total career development of each student by providing basic, job-related skills which will allow the widest range of future career advancement. At the same time, schools should equip students with the basic competencies to learn, improve, and revise their capabilities.(23)

Competencies that are needed, as seen by the State Board of Education: Specific competencies required by students to attain this goal include learning basic skills in communication and calculation, as well as fundamental skills and knowledge related to one or more job specifications. Further, students must understand their desires for future job satisfaction and also develop a sense of professionalism. In addition

to the individual skills and attitudes related to employment, students must have sufficient knowledge about the employment market, policies and procedures to satisfactorily and systematically seek jobs, to progress through a career, and, as necessary, to have the confidence to change or alter initial career plans.(24)

The Student Centered Learning System's Behavioral Projections are consistent with this goal of the State Board of Education, specifically Behavioral Projection number six. The proposed model for career education is designed to meet certain aspects of Quincy Public Schools goals.

Figure I is a graphic illustration of the proposed Model. It shows the career development process from early childhood through the school life span and on through adult life. It is built on a framework of six interacting factors used for planning and organizing the program.

1. Placement
2. World of Work
3. Self concept
4. Career planning and preparation
5. Curriculum
6. Community

Placement will be the ultimate goal of the career development process which will come about through competencies gained from information, experiences, activities, and explorations in the broad range of career options.

The 16 Career Clusters (see list) comprise the World of Work.

The 16 Career Clusters are:

1. Agri-Business and Natural Resources.
2. Business and Office.
3. Communications and Media.
4. Consumer and Homemaking.
5. Construction.
6. Education.
7. Environmental Control.
8. Fine Arts and Humanities.
9. Health.
10. Hospitality and Recreation.
11. Manufacturing.
12. Marine Science.
13. Marketing and Distribution.
14. Personal Services.
15. Public Services.
16. Transportation.(25)

It is our intention to integrate these 16 Career Clusters into each discipline area of Quincy Public Schools Curriculum and Instruction, and from these into the four areas, for Relevancy, as stated earlier.

Competencies will be gained by development of a positive Self-Concept by an individual, by helping him identify and understand his capabilities, potential, abilities, interests and attitudes. He will be aided in making a mature career decision.

The student will be able to reinforce his self-image by Career Planning and Preparation; guidance and counseling will play an important part. The student will be made aware of his strong and weak points; he will gain knowledge of industrial and business needs; future job forecasting and projections, which will provide him with information for measuring job opportunities in a chosen job cluster. This continuing decision making process will provide the individual with relevant information about himself and the world of work, so that he may have freedom of career choices.

Career choice will be influenced by Curriculum.

The curriculum will be the total integration of Career Education Concepts and Objectives and Concepts and Objectives of the other disciplines. Curriculum content will provide effective job skills in the instructional process and will give added meaning and relevance to the other disciplines. Included in the Curriculum will be the utilization of Community Resources.

Community Resources will include sources such as parents, government, business, industry and church, in this area. They will be used for awareness, exploration, cooperative programs, distributive education, and work study purposes as well.

As stated earlier, career development will be developed within the sixteen listed Career Cluster areas. In turn, these are to be integrated with the several Quincy Public Schools disciplines, and thence under four major areas of (1) Aesthetics, (2) Communication, (3) Human Relations, and (4) Technology, for relevancy. In moving from K - adult in the model, the student will receive career development preparations in all of the discipline areas, sequentially developed, to offer career

awareness, orientation, exploration and job preparation for all students for entry into the world of work or further education after graduation from high school.

In the elementary grades (K - 6) career awareness and orientation in the world of work will be based on discipline-related activities that will expose youngsters to occupations in the immediate environment around them. In grades K - 1 learning experiences will center around the youngster in regards to who he is and how he is alike and different from other youngsters; they will be given simple tasks to do which require individual and/or group interaction to develop positive attitudes toward others and essentially toward work. In doing so the home and family is brought into play. School curriculum considerations will be in the discipline areas of Arts and Crafts, Social Studies, Music, Language Arts, Mathematics, etc. In grade one, emphasis will be put on occupations in his immediate environment, in the home, and school and be shown how to appreciate beauty, shapes, and designs, and he will relate workers responsible for them.

In Grades 2 - 3 emphasis is put on workers out in the local community and its surroundings. Curiosity will be focused on people; how people work together, why they work, and where they work. A small community is simulated and students will play the role of a worker of their selection and actually play the part, wearing workers' uniforms and play acting the kind of work using selected materials, tools and toys. All disciplines are involved here, such as communications, Math, Social Studies, Science, etc.

Grades 4 to 6 will introduce the youngster to the orientation stage of career development. Experiences will become more realistic and more closely related to the disciplines. The youngster will be introduced to the Career Clusters. Emphasis will be put on career clusters under aesthetics, communications, and the human relations categories. Technology we will hold until later. Discipline-related learning experiences will be more action oriented and more realistic.

Aptitude development patterns will begin to emerge. As they appear they will be nurtured and directed. Community and school resources will be used for exploration purposes when a student or students become interested in a career area or choice. Guidance (by guidance personnel and teachers) will begin to play a more important role at this stage. The curriculum and instructional activities will be structured with the integration of all the disciplines and career areas. Basic hands-on activities in selected job clusters will be experienced, through the use of job kits and simulated materials performed in designated work centers.

A model at the elementary level by which these experiences may be built has been developed by the staff at the Francis W. Parker School. Much of the groundwork has been done for experimental implementation.

The backbone or career vehicle used for the model in the elementary grades and possibly through to grades 8 is the Community Career Exploration Chart, developed by Frank Leporini. The chart is a large artist's conception of a community which contains elements for implementing learning activities for several common occupations included in the 16 Career Clusters. The chart can serve as a career development

curriculum guide, career accountability guide, or a career game chart. It will work to advantage in using the multi-disciplinary approach for career awareness orientation and exploration stages. The chart is to be in color and displayed in each learning area. An instructional booklet will be available for the intended uses of the chart in the learning process.

At the grades 7 - 9 level will commence the exploration stage of career development. Career occupations in the Technology area will be introduced. In this category exploration experiences will be centered in developing basic skills, confidence and self-reliance. Career interests are allowed to be ventured, leading to a career cluster choice. Teachers will introduce and integrate career aspects into their planning of learning experiences (Component #7, Student Centered Learning System). Again, these tie in with the 16 Career Clusters. Hands-on activities will be experienced in work centers using a multi-disciplinary approach, utilizing all building, shop, and lab facilities. When students have selected a career choice or cluster they will then explore work activity in the cluster using school resources, such as the Quincy Vocational-Technical School where appropriate, or business and industry in the community. They will explore as many job clusters as they show interest in or aptitude for. At the end of the ninth grade he will possibly narrow his choice to one career cluster. At this level emphasis will be put on career decision making.

Occupational Cluster charts, developed by Frank Leporini, relevant to the subject matter in the disciplines will be observable in each discipline area. These can serve as a career learning guide for teachers, as career accountability guide and as a discipline relevancy vehicle. Students will receive discipline-related exploratory experiences in five work cluster

areas in each of the grades 7 - 9.

In grades 10 - 12 will be the preparation stage of career development. Occupational Cluster charts will continue to be used as in grades 7 - 9. The student, in most cases, will have narrowed his or her career choices to three career clusters of the sixteen available to him. More concentrated, sophisticated, realistic activities directly related to disciplines will be experienced. The emphasis will be to prepare a student in further skill development, exploration in job clusters, preparation in a specific job cluster, specific job entry skills, and saleable skills for employment after graduation; or, for postsecondary schools such as technical school or a four year college, etc. Community resources will be made available for cooperative education, work study and off-campus on the job training; in a specific occupation or a career cluster.

Group counseling is provided to give students career information and decision making skills. Individual counseling by guidance personnel and/or teacher-advisors will be made available to help solve problems when they arise.

Occupational information centers will be available at the secondary level for a student to get the information about career clusters.

At the postsecondary level a career development process will continue for individuals who desire specific skill training in one occupation, upgrading and retraining, technical training in a chosen field or a college preparatory education in any of the sixteen work clusters. This will possibly be integrated with Mr. Hannon's Adult Education programs where applicable.

At this level an individual will have made a career decision and the learning process will be concentrated on that career choice. Subject

matter will be directly related to the most realistic activities in the selected technical or professional occupation in a career cluster.

At the adult level an individual will be able to go on to continuing education, for career mobility and change, to gain proficiency and excellence in a career cluster. In so doing he or she will gain individual freedom, understanding, self-fulfillment, possibly become a better citizen, and a more competent worker.

Available school and community resources will be used in the learning process. Placement, counseling services, and information centers will be made available for postsecondary and adult training.

The Model, then, interrelates six factors, in a K - Adult continuum for individual learners, integrating concepts and objectives of career education with concepts and objectives of the other disciplines.

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Staff Development

The proposed model cannot be properly implemented without an in-service program for the teachers and guidance counselors who are to be involved in the implementation. Components 2 through 10 of the Student Centered Learning System will be the framework of the staff development effort.

Mr. Chrystal, Director of Staff Development, will be asked to assist in the development and operation of these programs.

Particular emphasis will be on instructional aspects of Components 6-10, to get to Component 4. It is felt at this time that these components can best be realized if they are developed during the implementation process of the Model. In this way, much of the content for each component of the Student Centered Learning System could be realized in one year for all disciplines at all levels; the following years would be used for refinement, revisions, evaluation, and updating. Formats to be used would be developed for this purpose by Mr. Chrystal, Mr. Daly, and Mr. Leporini.

The recommended design for the workshops is as follows:

a. Discipline coordinators and the career resource person will integrate discipline concepts, objectives and SPO's with those for career education. The process will be explained during the in-service sessions.

b. In the elementary level and the 7-8 level the initial workshop time will be used to orient and instruct staff in the use of the Community Career Exploratory chart. Instructional booklets will be developed by Mr. Chrystal and Mr. Leporini explaining alternative uses for the chart. The same procedure will be used for staff development in the use of the Career Cluster. charts at the upper secondary level.

c. Career resource person, Mr. Daly, and discipline coordinators

will work with staffs to show and to work as to how discipline learning activities can be integrated with careers and career cluster experiences, using appropriate media.

d. Instruction will be given as to how, during the implementation process, diagnostic and evaluative tools are to be used and documented in a diagnostic and prescriptive approach.

e.. Options will be explored as to effective recording of student progress and instructional management needs, in generating Component #9.

f. Options in developing Components 7 and 8 will be explored, and supervised development of some of these as starters will take place.

g. Roles of the guidance personnel in the implementation of the Model will be discussed.

There are several ways as to how workshops can be made to function. Information that we have obtained from ERIC should prove helpful in developing workshops for career education. The following may be procedures to be considered.

There are roughly 170 elementary teachers, 90 junior high school teachers and 130 high school teachers. Workshops could be held during the summer, Saturdays, afternoons, by providing released time, or vacations, remunerated by money or in-service credits.

At the elementary level it is proposed that a task force team be assigned to the elementary schools each appropriate Tuesday afternoon, which is presently available to them.

At the secondary levels it is proposed that classes be held for two hours after school one day each week for 10 weeks, per group. In-service credit would be offered.

Implementation Tasks

Career Education Model

Punch List Page 1

	To Be Done	In Process	Completed	Responsibility
1. Obtain data base as to status of Career Education in North Quincy High School District, using Student Centered Learning System framework as a guideline.			X	Mr. Woodward Mr. Leporini
2. Develop a Rationale for Career Education.			X	Mr. Leporini Mr. Woodward
3. Identify program goals and objectives of Career Education, consistent with Quincy Public Schools goals.			X	Mr. Leporini
4. Develop Career Education Model to attain Goals and Objectives from current status.			X	Mr. Leporini
5. Budget for Year 1.		X		Mr. Daly, Mr.Leporini, Mr. Woodward
6. Develop Career Education Information Centers - secondary level.		X		Mr. Daly, Mr.Leporini, Dr. Griffin
7. Interrelate Career Education Program Objectives with Behavioral Projections of Quincy Public Schools.			X	Mr. Woodward Mr. Leporini
8. Specify Curriculum Concepts of Career Education, related to Behavioral Projections.		X		Mr. Leporini
9. Develop General and Specific Objectives for Career Education curriculum, Career Education Concepts.		X		Mr. Leporini Mr. Daly Mr. Woodward
10. Integrate Career Education Concepts, Objectives, and SPO's that are currently available, namely:	X	X		Mr. Leporini w/following:
a. Communications	X	X		Mr. Deyeso
b. Mathematics	X	X		Mr. White
c. Social Studies	X	X		Mr. Deyeso
d. Science	X	X		Mr. Sullivan
e. Foreign Languages	X	X		Mr. Swartz

Implementation Tasks

Career Education Models

Punch List Page 2

	To Be Done	In Process	Completed	Responsibility
11. Tie integrated Career Education Concepts, Objectives, and SPO's into Student Centered Learning System/Data Processing coding system.	X			Career Ed.Spec., w/ Mr. Brennan Disc. Coordinators
12. Identify Diagnostic and Evaluative Tools for:	X	X		Mr. Leporini Miss Forsyth
a. Elementary level.	X	X		Mr. Leporini Miss Forsyth
b. Junior high school level.	X	X		Mr. Leporini Miss Forsyth
c. High school level.	X			Mr. Leporini Miss Forsyth
d. Postsecondary level	X			Mr. Leporini Miss Forsyth
13. Develop Career Education Experience Centers - elementary.	X			Career Educ.Spec., Elem.Prins. & Staffs
14. Create or adapt student profile systems.	X	X		Career Ed.Spec.,Dr. Griffin & teachers
15. Spell out occupations in the 16 Career Clusters.	X	X		Mr. Leporini Mr. Daly
16. Identify occupations relevant to each discipline and relate by level:	X			Career Ed.Spec., Mr. Daly Mr. Woodward
a. Elementary.	X			Career Ed.Spec.,Mr. Daly,Mr.Nolan,Mr. Woodward
b. Junior high.	X			" " " " "
c. Secondary.	X			" " " " "
d. Postsecondary.	X			" " " " "
17. Develop and implement a workshop program for teachers and guidance counselors.		X		Mr. Leporini Mr. Daly Mr. Chrystal
18. Organize each building to include career education contact person.	X			Career Ed.Spec., w/Prins.
19. Identify materials, kits, and appropriate media for Learning Activities.	X	X		Career Ed.Spec.,Mr. Daly, w/teachers

Implementation Tasks

Career Education Models

Punch List Page 3

	To Be Done	In Process	Completed	Responsibility
20. Arrange to have school resources manufacture designed kits or projects as appropriate for learning activities for following levels:	X			Career Ed.Spec., Mr. Daly
a. Elementary.	X			" " " "
b. Junior high.	X			" " " "
c. High School.	X			" " " "
21. Develop Student Learning Activities.	X			Career Ed.Spec., et al.
22. Develop systematic application of Media, integrated with Component 7.	X			" " " "
23. Develop Classroom Management System for Career Education/Related Disciplines.	X			" " " "
24. Continue to work toward Self Learning Environment	X			" " " "
25. Budget for Year 2.	X			Career Ed.Spec.,Mr. Daly,Mr.Woodward
26. Integrate career learning activities into learning activities in the disciplines, by level:	X			Career Ed.Spec.,Disc. Coords.,teachers
a. Elementary.	X			" " " "
b. Junior high.	X			" " " "
c. High school.	X			" " " "
d. Postsecondary.	X			" " " "
27. Develop evaluation system.	X			Career Ed. Spec.
28. Implement phase I (year 1) of program.	X			Career Ed. Spec. et al.
29. Assess present facilities.			X	Career Ed.Spec., Principals
30. Determine renovations required to accomodate Career Education activities.		X		Career Ed. Spec., Prins.,teachers, Mr. Daly
31. Career Education activities. Continue with Model implementation.	X			

Implementation Tasks

Career Education Models

Punch List Page 4

		To Be Done	In Process	Completed	Responsibility
32.	Determine costs of renovations.	X	X		Mr. Leporini, Principals
33.	Renovate selected areas.	X	X		" " "
34.	Budget for Year 3.	X			Career Ed.Spec., Mr. Daly Mr. Woodward
35.	Determine student programs and schedules.	X			Career Ed.Spec. Guidance Personnel
36.	Implement secondary and tertiary phases of program (Years 2 and 3).	X			All Concerned
37.	Establish a job bank for work study, distributive education, off-campus experience.		X		Mr. Leporini Mr. Meyer, Mrs. Barbour
38.	Provide special preparation for jobs in demand in the community.	X			Mr. Daly, Career Ed.Spec.
39.	List available resources for awareness orientation and exploration.	X			Career Ed.Spec. Mr. Daly, Work Stdy D.E., Personnel
40.	Acquire occupation projections for introducing new training activities.	X			Career Ed.Spec., Mr.Daly, Mr.Hannon Dr. Pierce
41.	Evaluate program.	X			Career Ed.Spec., Mr Daly, Mr.Woodward
42.	Determine revisions.	X			Career Ed.Spec.Mr. Daly, Mr.Woodward
43.	Make necessary revisions.	X			Career Ed.Spec.
44.	Complete evaluation and update system.	X			Career Ed.Spec.Mr. Daly, Mr.Woodward
45.	Interrelate Mr. Hannon's Adult Education program.	X			Career Ed.Spec.Mr. Daly, Mr.Hannon
46.	Interrelate Quincy Junior College with Career Education.	X			Career Ed.Spec.Mr. Daly, Dr. Pierce
47.					
48.					
49.					
50.					

Recommendation for Cooperation with the State Department of Education

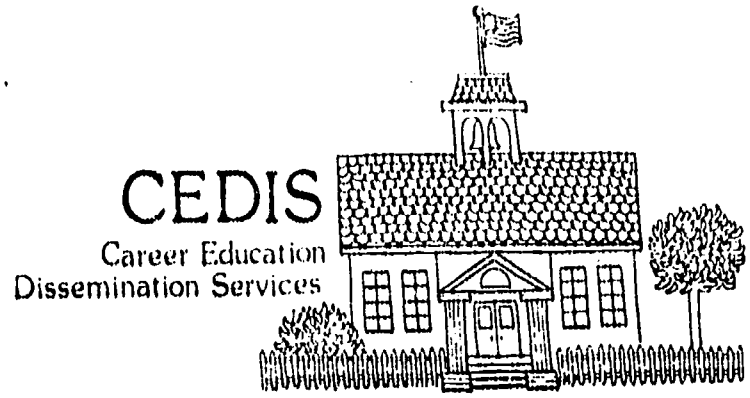
This year much groundwork has been done by the career resource person in residence at the North Quincy High School, for implementing career education at that level.

The program has caught the interest of the State Department of Education, Division of Occupational Education. They would like to use the proposed Model as a program model for dissemination throughout the Commonwealth of Massachusetts.

In return, it has offered Quincy help in developing a pilot program at the elementary and secondary level. It has offered to supply Quincy with a limited number of Community Career Exploratory Charts, Discipline Related Occupational Career Charts and job kits for the secondary level.

There is a possibility that State and/or Federal funds could be brought into Quincy through this kind of cooperative effort.

It is recommended that the Quincy Public Schools avail themselves of the State's offer, using this proposed Model.



This document has been submitted to ERIC under the auspices of Career Education Dissemination Services (CEDIS).

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