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ABSTRACT

A project was conducted to develop and pilot test a process for vertically articulating curriculum between the secondary and postsecondary levels of vocational-technical education in Minnesota. Subgoals were to develop and validate a procedure for developing statewide task lists and competency records and to develop a process for teacher and administrator utilization of the articulation products. The five areas of research and development included: (1) articulation product development, (2) articulation process development, (3) dissemination plan development, (4) production of publications for regional articulation, and (5) identification of data sources for updating and revising articulation products. A procedure for developing articulation products was developed and validated, and a regional process was successfully piloted through the developmental phase of automotive mechanics articulation in three pilot sites. Five publications were printed and 12 are currently being printed. Diffusion of project goals, information, and products was accomplished statewide and nationally. Both the procedure for product development and the regional dissemination process have been adopted by the State Department of Education. It was concluded that the overall evaluation of the project was positive. (NJ)

SECONDARY - POST SECONDARY
CURRICULUM ARTICULATION PROJECT
for VOCATIONAL TECHNICAL EDUCATION
in MINNESOTA

A FINAL REPORT

PROJECT NUMBER: 3 - C - 76

CONDUCTED USING GRANT AWARDED BY
DIVISION OF VOCATIONAL - TECHNICAL EDUCATION
MINNESOTA DEPARTMENT OF EDUCATION
UNDER PART C/D OF PUBLIC LAW 90-576

DR. LAURA J. BURGER, PROJECT DIRECTOR 1975-76

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JUNE 30, 1976

Final Report

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Research and Development Project

in Career Education

Conducted Using Grant Awarded by

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Minnesota Department of Education

Under Part C/D of Public Law 90-576

The project reported herein was performed pursuant to a grant from the Division of Vocational-Technical Education, Minnesota Department of Education. Grantees undertaking such projects under Division sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated, therefore, do not necessarily represent official Division position or policy.

Laura J. Burger, Ph. D.
Director, 1975-76

Preface

Over the past years, the state of Minnesota has demonstrated a strong commitment to vocational education. There are now 33 post secondary vocational education institutions. Approximately 10 years ago, provisions were made to support the growth and development of vocational programs at the secondary level. A priority was placed on assisting groups of districts that wish to share dollars and students to offer a greater variety of vocational programs to secondary students. Fifty-seven cooperative centers offer vocational training to secondary school students at the present time. It is anticipated that others will be developed until 75 centers serve all districts in Minnesota. Secondary vocational programs are also offered at 400 high schools in Minnesota.

Forseeing the problems that could result from the lack of vertical curriculum articulation between secondary and post secondary education offerings, there emerged a need for this research project. Vertically articulated programs, when achieved, allow students to progress from secondary to post secondary programs, from secondary programs to the world of work, and from the world of work to post secondary institutions without gap or overlap in vocational instruction. It is anticipated that the findings from this study will be useful for adult vocational programs as well. The problem of "how do we, in Minnesota, achieve vertically articulated curricula", is the basis of this research.

Robert P. Van Tries, Assistant Commissioner
DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

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CHAPTER I

BACKGROUND OF THE PROJECT

INTRODUCTION

Over the past three years, the Vocational Division of the Minnesota State Department of Education has expended nearly $200,000 on the discovery and development of a procedure for developing those products (task lists and competency records) which can be used to articulate secondary and post secondary vocational technical curriculum in Minnesota. An articulated curriculum allows a student to move from the secondary level of vocational training (or from on-the-job experience) to the post secondary level of vocational training without having to repeat instruction for learning those tasks already mastered. Likewise, an articulated curriculum provides opportunity for students to acquire more complete training because the tasks to be performed are explicit and instructors are less apt to inadvertently omit the teaching of important content from their occupational programs.

BACKGROUND

During 1974-75, progress was made toward identifying and validating a procedure for developing those products (task lists and competency records) needed for articulating occupational programs offered in Minnesota's secondary and post secondary vocational technical institutions. The procedures developed for producing these articulation products (task lists and competency records) emerged from actions taken in auto mechanics occupations and clerical secretarial occupations.

Last year a Handbook for vocational-technical instructors and coordinators was also published. The Handbook explains to instructors how they can deliver recommended task-based content to students. Competency based, personalized instruction is advocated in the Handbook.

A complete description of the research and development activities that relate to vocational technical curriculum articulation in Minnesota is given in the Final Report for 1972-75 entitled Developing Articulated High School and Post High School Vocational Technical Curricula in Minnesota. It is assumed that the reader who wishes additional background information on the underlying rationale for this project will refer to that document.

CHAPTER II

PROJECT GOAL AND PROCEDURES

INTRODUCTION

This chapter identifies the goal of this project and documents the procedures used in each of its five areas of research and development. In the latter sections of this chapter actions taken in two service areas of this project are explained.

THE GOAL of the PROJECT

The goal of this project is to develop and pilot a process for vertically articulating curriculum between the secondary and post secondary levels of vocational technical education throughout the state of Minnesota. This goal includes both (a) the development and validation of a procedure for developing those statewide products (task lists and competency records) needed for articulation and (b) the development of a process for teachers and administrators to follow as they utilize the articulation products through working with schools in their region of the state.

RESEARCH AND DEVELOPMENT AREAS (1975-76)

Attainment of the project goal required that five areas of research and development be identified. Those areas were: I. Development and validation of a procedure for developing task lists for those occupational programs approved by industrial representatives from throughout the state of Minnesota; II. Development and validation of a format for competency records which can be used in secondary and post secondary vocational schools to replace and/or supplement the traditional report

card; III. Development of a dissemination plan which encourages statewide adoption of articulation products; IV. Development of publications useful to local school personnel as teachers engage in the articulation process and convert their teaching to competency based instruction; V. Identification of possible data sources that can be used in the future to update and revise the articulation products so that a complete curriculum development system emerges for the state. The procedures followed in each of the above five areas of research and development are outlined in the sections that follow.

R & D AREA I: Development and validation of a procedure for developing task lists for occupational programs approved by Industrial representatives from throughout the state of Minnesota.

The procedure for the development of task lists was devised through actions taken in automotive occupations and validated through use in clerical secretarial occupations. Formative evaluation was an important part of this developmental research effort in that many pieces of data were informally gathered, used and re-evaluated as the task list development and validation efforts continued. A description of the procedure used for developing three (3) task lists in automotive occupations is given below. This same procedure was subsequently used for the development of twelve (12) clerical secretarial task lists. Each task list represents an occupational program from which industry representatives from throughout the state of Minnesota have indicated that students could graduate and find jobs.

PROCEDURE FOR DEVELOPING TASK LISTS

FOR OCCUPATIONAL PROGRAMS IN MINNESOTA

1. Resources (task lists, performance objectives, etc.) are collected

for project use.

2. A subject matter consultant for the occupational program area is identified, hired and oriented to the project goals and resources.

3. A first draft of task list for the entire program area is constructed, after thorough review of all resources and after having interviewed a number of teachers throughout the state.

4. Instructors from throughout Minnesota are identified to make up a WORKING COMMITTEE. Program supervisors at the State Department of Education suggest names of individuals who would be effective on this committee.

5. A large number of vocational teachers are surveyed to determine job titles commonly assumed by graduates of the program area.

6. Tentative titles for occupational programs are decided upon and tentative job descriptions are written. Separate task lists for each occupational program area can then be developed by the working committee, project staff and the state supervisors for that program area.

7. The draft of each task list is submitted to a committee of industry representatives from throughout Minnesota. This meeting is one day long. The purpose of the meeting is to bring together employers who are in charge of hiring, firing, supervising, and promoting employees. In the presence of the working committee, industry representatives are asked to respond to the range of occupational programs offered, to judge the adequacy of the number and description of tasks suggested on each task list, and to point out the tasks they feel are "optional" and those tasks that are "very important" for the student to be able to perform upon taking the job described in the job description. The competency record is reviewed by industry representatives to determine whether or not modifications are needed to adequately communicate student performance to prospective employers.

8. The task lists and competency records for each approved occupational program is printed in booklet form. These products are then made available to secondary and post secondary instructors in Minnesota for the purpose of CURRICULUM ARTICULATION.

A description of the proposed task list updating strategy is given later in this chapter under R & D Area IV.

R & D AREA II: Development and validation of a format for Competency Records which can be used in secondary and post secondary vocational schools to replace and/or supplement the traditional report card.

The format of the competency record was designed to coincide with

the format of the task list for each occupational program. The following example shows the format of the task list:

TASK LIST

Area of Competency #1
Perform Steering and Suspension System Service

IA. Inspect Steering and Suspension System
1. Inspect springs for breakage and sag
a. Coil
b. Leaf
c. Torsion bar
2. Inspect shock absorber for leaks, operation and mounting
a. Standard
b. Air
3. Inspect control arm bushings for distortion and wear
4. Check ball joints for wear and lubrication
5. Check spindles and steering knuckles for bent parts and worn parts
6. a. Air pressure
b. Proper size
7. Inspect wheel bearings for noise and condition
8. Inspect tie rods for looseness, seals and bent rods
9. Inspect idler arms for worn bushings
10. Inspect stablizer bars for breakage and bushing wear
11. Inspect steering arms for damage
12. Inspect drag links for damage and loose ends
13. Inspect bell-crank assemblies for damage and wear
14. Inspect rear-axle housing for damage, broken welds, bushings and leaks
15. Inspect frame and body for bends, cracks damage and height
16. Inspect sway bars for bushing wear
17. Inspect strut bars for bushing wear
18. Inspect solid-beam axles for damage and bushing wear
19. Inspect trailing and torque arm for distortion
20. Inspect trunnions for looseness
21. Check torsion bar height
22. Inspect front wheel drive/steering axle for worn parts

TABLE I
An example of the format of the Task List

Each statement of competency on the Task List is assigned a roman numeral. Under the statement of competency the appropriate tasks are listed and numbered.

IIA.	Remove and Replace Steering and Suspension Components
1.	R/R springs and adjust
a.	Coil
b.	Leaf
c.	Torsion bar
2.	R/R shock absorbers
a.	Standard shock components
b.	Air shock components
3.	R/R control arm
4.	R/R ball joints
5.	R/R spindles and steering knuckles
6.	Mount and demount tires. Use tire changing machine
a.	Repair tires
7.	R/R wheel bearings, pack and adjust
a.	Replace seals
8.	R/R tie rods and check toe-in
9.	R/R idler arm and adjust
10.	R/R stabilizer bars
11.	R/R steering arms
12.	R/R drag links and adjust
13.	R/R bell-crank assemblies

TABLE II
A Statement of Competency with tasks listed

The competency record is used to replace and/or supplement the traditional report card. Only the Statements of Competency appear on the competency record as can be seen in the example below.

An Excerpt of the COMPETENCY RECORD for Auto Mechanics Occupations						
	Secondary			Post Secondary		
	Grade	Year	Teacher	Grade	Year	Teacher
AREA OF COMPETENCE #1: PERFORM STEERING AND SUSPENSION SERVICE						
IA. Inspect Steering and Suspension System						
IIA. Remove and Replace Steering and Suspension Components						
IIIA. Diagnose Steering and Suspension Systems						
IB. Inspect Manual and Power Steering Systems						
IIB. Remove and Replace Manual and Power Steering System Components						
IIIB. Rebuild Manual and Power Steering Components						
IVB. Diagnose Manual and Power Steering System						
COMMENTS:						

TABLE III:
An illustration of the Competency Record format

If a student or teacher wishes to know what tasks are included in any statement of competency he/she must refer back to the Task Lists. Generally it is required that the student learn to perform all of the tasks listed under any statement of competency before he or she is given a grade in the appropriate space on the Competency Record. Exceptions are sometimes made, however, when teachers (during regional articulation sessions) jointly agree to omit certain task(s) due to lack of equipment, or limited space, etc.

The grading scale used for an occupational program appears to be specific to the nature of the subject matter and the requirements of industry. Verbal interaction among teachers and industry representatives resulted in a grading scale for automotive occupations which is based upon the amount of supervision needed by the student (graduate).

COMPETENCY RECORD

Occupational Programs: Automotive Mechanic, Service Center Mechan :, Lubrication Specialist

This competency record tells what the student, who is named below, has demonstrated that he or she can do. A committee of industrial representatives from throughout Minnesota assisted in identifying the competencies needed by graduates of the occupational programs shown above. For more specific information, refer to the task list for each occupational program.

Grading:
5 - able to help others; very competent
4 - able to perform the task(s) without supervision; competent
3 - able to perform the task(s) with limited supervision
2 - able to perform the task(s) with direct supervision
1 - unable to perform the task(s)
✔ - received introduction only

TABLE IV
Gr ing Scale as it appears the Automotive Mechanics Competency Record

In contrast to this, the important factors used in clerical/secretarial occupations to determine student competence are usually speed and accuracy.

COMPETENCY RECORD

HUMAN RELATIONS AND PERSONAL DEVELOPMENT

OCCUPATIONAL PROGRAM: Secretary/Shorthand Name of Student _____

This competency record tells what the student, who is named above, has demonstrated that he or she can do. A graduate is one who has demonstrated competent performance of all the tasks designated for this occupational program. This competency record is to be used as an evaluation of and/or supplement to the traditional report card. Student performance can be rated at the secondary and/or post secondary level.

RATING SCALE:

5 - Performs task(s) with ability that consistently exceed(s) program minimum standards set for job entry level; very competent.

4 - Performs task(s) at job entry level; competent.

3 - Performs task(s) with periodic assistance.

2 - Performs task(s) with constant assistance.

1 - Is unable to perform task(s).

T - Demonstrated ability to perform task(s) at or above job entry level by taking a challenge test.

PWPM - Actual production words per minute (PWPM) obtained by student.

SCHOOL(S) ATTENDED:	DATES ATTENDED	INSTRUCTOR'S NAME(S)

TABLE V
The Grading Scale as it appears on the Clerical/Secretarial Competency Records

R & D AREA III: Development of a dissemination plan which encourages statewide adoption of articulation products.

The articulation process used by teachers and administrators to articulate secondary and post secondary curriculum in three pilot sites was developed for the purpose of using it repeatedly in the implementation efforts planned the following year. The pilot sites served as the grounds for trying out, revising and condensing the time required for accomplishing the developmental phase of each articulation effort. (For description of schools participating in the pilot projects located in the Rochester region, the East Grand Forks-Thief River region and Duluth public schools, see Appendix A).

Each of the three pilot sites followed the basic articulation process outlined below. Actions described are referred to as the developmental phase of the articulation process. The articulation process has three phases: (I) Developmental Phase, (II) Implementation Phase, (III) Evaluation and Revision Phase.

I. Developmental Phase

1. The Director of the applicant post secondary school and the State Articulation Project Director develop a budget for the regional articulation sessions. Funds are obtained from the State Department of Education Vocational Division-Operations Section.

2. The Director of the applicant school sends letters of invitation to principals (directors) and superintendents of surrounding high schools and vocational centers, encouraging them to become involved in the regional articulation effort.

3. The State Articulation Project's consultant-on-site travels to visit the instructors in each of the surrounding schools. Verbal invitations are extended to them to participate in the articulation sessions.

4. A dinner meeting is held for administrators and instructors who wish further information about and/or wish to participate in the regional articulation sessions.

5. The actual 40 hours of developmental work is undertaken by the group.

   a. Teachers work together using the Exploratory program workbook to choose tasks they currently teach.

   b. The group writes terminal performance objectives (special forms are provided, see Appendix A) for all tasks so that standards and conditions of performance are agreed upon by all teachers of the same occupational programs.

   c. Each teacher, using the terminal performance objectives just written by the group, reconsiders what is currently covered in his/her occupational program. Decisions are then made regarding what will be taught at each level. The goal is to help students be competent at performing the tasks selected upon leaving the occupational program.

   d. Students graduate from an occupational program when they can perform all of the tasks required for that occupational program to the level of competency stated in the terminal performance objectives.

6. A commitment is made by each instructor regarding the number of hours he/she will spend in each area of Competency during the next school year. Emphasis is upon choosing the number of tasks that can realistically be taught so that students are competent upon leaving the program. (The decision is to be evaluated and revised at the end of that year).

7. Instructors decide upon how they wish to test students and determine whether or not they have reached each of the terminal performance objectives selected. Performance testing or written or oral examination may be selected. (See Appendix B). The group members may agree to develop its own standard tests for the region or each teacher may be responsible for developing his/her own evaluation instruments.

Regional sessions were conducted for the purpose of piloting and further developing the articulation process in March-April (Rochester), April-May (East Grand Forks-Thief River), and June-July (Duluth). Each site was encouraged to use the work done in previous sites for reference purposes. For this reason the total number of person hours required to

develop terminal performance objectives during the developmental phase decreased with each site.

Pilot Site for Articulation		
Rochester Region	East Grand Forks Thief River	Duluth
677 Person Hours	409 Person Hours	452 Person Hours
N=12	N=19	N=8

TABLE VI

Total Number of person hours spent in each pilot articulation site for automotive mechanics articulation.

No further reduction in the numbers of hours necessary (40 hours per site) is anticipated. All teachers from articulating programs are expected to attend the 40 scheduled hours.

R & D AREA IV: Development of publications and audio visual presentations useful to local school personnel.

Articulation involves a conversion to competency based instruction. For this reason, the literature was reviewed and the vocabulary of the project was defined so that an informational booklet could be produced to inform teachers, coordinators and administrators about competency based instruction. The booklet that was developed is entitled: The Competency Based Route to Vertical Curriculum Articulation.

Task List booklets developed and printed include those for three auto mechanics occupations and the exploratory program workbook for the auto mechanics area. During July, 1976, task list booklets for 12 clerical secretarial occupational programs will be printed.

A slide tape presentation was developed and produced to summarize

the Research and Development activities of the Curriculum Articulation Project. It was written to summarize the current articulation information and actions within a 12 minute time frame. It has been particularily useful in explaining project goals and activities to committees of industry representatives.

R & D AREA V: Identify possible data sources that can be used in the future to update and revise the articulation products (task lists and competency records.

The sources of data that were identified as potentially useful for updating task lists and competency records were sought via verbal interaction with the groups described below.

> The SYSTEM for UPDATING task lists and competency records is developed with the intention of continually bringing industry and education closer together in their perceptions of what a competent graduate is to be able to do upon becoming employed.
>
> Data for updating in the future may be gathered by:
>
> a. obtaining feedback from state advisory board members (committees of industry representatives which are currently set up and working with state supervisors to determine trends and review programs.
>
> b. summarizing data supplied by students through the follow-up of graduates that actually took jobs in that occupation. A graduate may be asked:
>
> 1. During this past year, how frequently did you perform each of the following tasks?
>
> 2. How much time did you spend on-the-job actually doing each of the following tasks?
>
> 3. Is it of moderate or more importance that you perform each of these tasks well?
>
> 4. Do you feel it was necessary for you to be competent in performing this task when you were first hired?
>
> 5. Are there any additional tasks which you feel you should have learned how to perform to be a better employee?

c. obtaining instructor feedback regarding tasks they teach and tasks they have added to the task lists because of geographic preferences of employers.

d. meeting with the same industry representatives who were initially involved in the review and development of task lists for the purpose of revising task lists.

This information could be used to continually update the articulation products (task lists and competency records) so that the emerging curriculum development system is kept current with the needs of graduates as they enter jobs in industry. It is anticipated that within the next three years it will be necessary to develop the actual procedure for collecting the necessary data for updating the articulation products now developed for automotive occupations. Speculative sources of updating data only, are cited at this time.

In conclusion, research and development areas that have produced new ideas, information and/or methods this past year, have been described in the first five sections of this chapter. A discussion of additional service areas of the project follows.

Concomitant with the generation of new ideas, information, and methods, this research and development project also provided services to the state and nation. This past year two Service Areas were identified: I: Coordination of articulation project activities with other agencies/ institutions in the State of Minnesota; II: Diffusion of project goals, information and products to other states that wish information and/or products developed through this funded project.

Service Area I: Coordination of articulation project activities with other agencies/institutions in the State of Minnesota. The project was managed during 1975 to coordinate activities with the State Articulation Steering committee. The Steering Committee is made up of Secondary and Post Secondary vocational administrators. Three meetings were held to obtain direction on articulation-related issues. Interaction with committee members helped to make decisions that ultimately would assure the usefulness of the articulation process throughout the state.

Program supervisors at the State Department of Education were involved in the articulation efforts for the purposes of 1) incorporating their input into the emerging curriculum development system and 2) more clearly defining the role of the articulation project and the role of state supervisors in vocational technical curriculum development and delivery in Minnesota.

Vocational administrators throughout the state have been updated on articulation project activities during regularly scheduled Directors' meetings. Opportunity for verbal interaction on articulation project activities is provided at these meetings.

Products developed by the Articulation Project were made available by the State of Minnesota, Department of Education - Vocational Division.

through the Minnesota Instructional Materials Center. Most products are available on a cost recovery basis to individuals both in Minnesota and from other states.

Teacher educators are encouraged to become involved in the regional articulation sessions so that they can familiarize pre-service and in-service teacher education classes with the procedures used and sources of curriculum content available to vocational teachers in the State of Minnesota. Selected teacher educators have observed articulation project activities throughout the past year.

Service Area II: Diffusion of project information products to other states that wish information and/or products developed through this funded project. Procedures for national diffusion of articulation project information and products have involved participation in national conferences, and discussions with articulation project directors from other states.

Contacts with project directors were made. The status of other current literature on the projects was obtained and reviewed. The table on the following page summarizes and makes comparisons between articulation projects in various states - including Minnesota.

ARTICULATION APPROACHES

	Minnesota	Texas	North Carolina	Wisconsin
PURPOSE/ DEFINITION OF ARTICULATION	*When curriculum is articulated, a student can progress from one level of training to the next desired level of training without an unnecessary gap or overlap in competence learned	*To provide secondary occupational learners who desire the opportunity to enter the post-secondary program at an advanced level without repeating material previously taken at the secondary level	*If occupational programs are articulated learners can be assured of receiving credit at the post-secondary level for work successfully completed in high school, thus avoiding repetition of work completed or retesting	*To provide a continuation, cooperation and coordination in the interest of providing a smooth transition for the continuing vocational student
APPROACH	*Planned Strategy (State Wide Approach *Competency Based Instruction	*Planned Strategy (Local District Approach) *Competency Based Instruction	*Planned Strategy (Local District Approach) *Competency Based Instruction	*Unstructured approach *No specific model was advocated on a state-wide or district level *Each district was encouraged to implement its own procedure
INITIAL PROGRAM AREA INVOLVEMENT	*Auto Mechanics *Clerical/Secretarial	*Auto Mechanics	*Auto Mechanics *Business Education *Drafting	*Most instructors in basically all program areas were informed of the focus on articulation
BUSINESS/ INDUSTRY INVOLVEMENT	*Stratified sample of business/indurstry representatives from throughout state involved with educators in developing Task Lists and Competency Records	*Committee of Industry Representatives reviewed the Auto Mechanics Articulation Manual (competencies, performance objectives and student profile sheet) after it was completed by the project development committee (educators)	*Business/industry (craft) advisors involved with educators in developing Task Lists	*Business/industry representatives were not systematically involved

	Minnesota	Texas	North Carolina	Wisconsin
IMPLEMENTATION	*Pilot test the articulation procedure in two program areas (auto mechanics and clerical/ secretarial) in two pilot sites in the state	*Pilot test the articulation procedure in one program area (auto mechanics) one geographic area involving seven school districts.	*Pilot test the articulation procedure in three program areas (auto, business, drafting) in basically one local area (four high schools and one post-secondary school	*No systematic pilot test of a specific articulation procedure is underway. *Various school districts are working on developing their own articulation strategies
METHODOLOGY FOR CBI A. TASK LISTS	*Centrally developed by a representative state sample of instructors and business/industry representatives and made available to anyone in the state *Specific occupational titles identified with separate task lists	*Competencies locally developed by a committee of educators (primarily secondary and post-secondary instructors) *One comprehensive Competency List *No specific occupational titles identified with separate Competency List	*Locally developed by business/industry representatives and educators *One comprehensive Task List *No specific occupational titles identified with separate task list	*If developed, local efforts involved *No systematic effort to develop task lists
B. COMPETENCY RECORD	*Centrally developed by a representative state sample of instructors and business/industry representatives and made available to anyone in the state *Goes with the student from secondary to post-secondary level and to the employer	*Student Profile Sheet locally developed by a committee of educators *Goes with student from secondary to post-secondary level and to the employer	*Student Vocational Skills Record locally developed by educators *Students have a packet size objective and performance card *Goes with student from secondary to post-secondary and to the employer *Certificate of Occupational Qualification	*Student Profile Record encouraged *No systematic effort to develop student profiles
C. PERFORMANCE OBJECTIVES	*Locally developed by secondary and post-secondary instructors working as a group with assistance from local advisroy committee	*Locally developed by a committee of educators (primarily secondary and post-secondary instructors)	*Locally developed by all secondary and post-secondary instructors in program area *Instructional Objective Guide developed	*No systematic effort to develop performance objectives *Some local efforts may be underway

	Minnesota	Texas	North Carolina	Wisconsin
D. CRITERION REFERENCED EVALUATION OR PERFORMANCE TESTING	*Locally developed by secondary and post-second instructors working as a group with assistance from local advisory committee *Emphasis on Applied Performance Testing	*Not addressed in Articulation Publications	Locally developed by all secondary and post-secondary instructors in program area *Emphasis on Applied Performance Testing	*No systematic effort to develop evaluation measures
E. INSTRUCTIONAL DELIVERY SYSTEM	*Traditional or Personalized *May include open entry/ open exit philosophy (local school district decision	*Traditional or Personalized *May include open entry/ open exit philosophy (local school district decision	*Personalized	*No approach appears to be advocated

TABLE VI:

Comparisons between Minnesota's Articulation Project and similar actions in other states.

National diffusion of project information and products was accomplished through discussion held with, and information mailed to directors of two funded clearinghouses for national research and development products and results. (Clearinghouse for Applied Performance Testing-CAPT- and Task Inventory Exchange). Both agencies published notice of Minnesota's Curriculum Articulation Project. In addition, project documents were announced and made available through AIM/ARM (Abstracts of Instructional and Research Materials in Vocational Technical Education) and ERIC (Educational Resources Information Center).

CHAPTER III

EVALUATION OF THE PROJECT GOAL

INTRODUCTION

This chapter evaluates the extent to which the stated goal of the curriculum articulation project was reached. The goal for 1975-76 was to research and develop a procedure which could be used statewide to vertically articulate curriculum between the secondary and post secondary levels of vocational technical education. This goal includes both (a) the development and validation of a procedure for developing those articulation products (task lists and competency records) needed for articulation and (b) the development of a regional process for teachers and administrators to follow as they utilize the articulation products developed for vocational education throughout the state of Minnesota. Formative evaluation was an important part of this developmental research effort in that many pieces of data were formally and informally gathered, used and re-evaluated as the developmental process continued. The success of this research and development effort was to be determined by whether or not the process developed for articulation is considered suitable for adoption and use statewide.

EVALUATION

A procedure for developing articulation products (task lists and competency records) on a statewide basis was successfully developed (through actions taken in automotive mechanics) and validated (through the same actions being taken in clerical/secretarial occupations). In both instances the procedure was reasonable in cost and efficient in terms of the length of time required to produce the task lists and competency records for each program area. Articulation products were developed and printed for auto mechanic occupations and developmental efforts are underway in twelve (12) clerical/secretarial occupations utilizing this

same procedure. In both instances, the procedure was reasonable in cost and efficient in terms of the length of time required to produce task lists and compentency records. Three (3) auto mechanics occupational program task list and competency record booklets, plus an exploratory auto mechanics program workbook were developed over a period of 18 months at a cost of $1,400; this cost included a parttime technical subject matter consultant and travel expenses for 25 industrial representatives.

The process developed for teachers and administrators to follow in regional articulation sessions was successfully used through the developmental phase of the articulation effort in each of the three pilot sites. It is anticipated that the same pilot schools will continue to be involved this next year as the evaluation and revision phase of the articulation process is researched and developed.

Products developed by the curriculum articulation project this past year include: The Competency Based Route to Vertical Curriculum Articulation.

Auto Mechanics task list booklets:

Lubrication Specialist

Service Center Mechanic

Automotive Mechanics

Exploratory Program for Auto Mechanics

Clerical/Secretarial task list booklets:

Office Services Aid

Typist

General Office/Typist

Receptionist

Secretary/Non Shorthand

Secretary/Shorthand

Data Entry Operator

Medical Secretary

Legal Secretary

Educational Office Personnel

Correspondence Specialist and Administrative Assistant

Correspondence Supervisor

Last year the following document was re-printed:

Handbook for Vocational Instructors Interested in Competency Based Instruction

All of the products developed by the Curriculum Articulation are available on a cost recovery basis through the Minnesota Instructional Materials Center (MIMC), 3300 Century Avenue, White Bear Lake, Minnesota, 55110.

In addition to the research and development areas in which the project took action, services were provided by the articulation project in 1975-76. The number of services provided is presented as evaluative data that exemplifies the contribution of this project both on the state and national level.

Project goals, information and products were diffused statewide and nationally through the following actions:

/In Minnesota/

(1) A presentation was made to the State R&D Review Committee for Vocational Education in January of 1976.
(2) Three project updating and information sessions were conducted throughout the year at regularly held meetings for secondary and post secondary directors in the state of Minnesota.
(3) Single copies of publications were mailed to every post secondary vocational program director, and to each secondary center director.
(4) Members of the working committees and industrial review committees for task list development received copies of the task list booklet as soon as they were printed.
(5) Sessions were held with auto mechanics and clerical/secretarial occupational programs instructors for the purpose of informing them of the goals and progress of the project.
(6) The Minnesota Instructional Materials Center was given permission to reprint project publications for the purpose of

making them available at cost to vocational programs in Minnesota.

(7) A session was held at the State Teacher Education Meeting held in the fall of 1975 for the purpose of informing teacher educators about project goals and obtaining their input. A follow-up open house was held in May of 1976 for the same purpose.

/Nationwide/

(1) Telephone contacts were made with articulation project directors in four other states (Texas, North Carolina, Wisconsin and Oregon).

(2) Information about Minnesota's articulation project, along with copies of publications were mailed to CAPT (Clearinghouse for Applied Performance Testing in Oregon) and the Task Inventory Exchange at Ohio State University. Both agencies published information about the project. In addition, the report and products from previous years and this year are available through ERIC and/or AIM/ARM.

(3) A presentation was made at the National Association for Supervision and Curriculum Development Meeting held in March, 1976.

(4) Contacts were made between state supervisors of auto mechanics and clerical/secretarial occupations in Minnesota and persons in like positions in other states.

(5) More than 50 letters of request were received by the project and answered through person-to-person correspondence during 1975-76.

(6) Each State Supervisor of Vocational Education received a copy of last year's final report and the booklet entitled Competency Based Route to Vertical Curriculum Articulation.

Curriculum related efforts of the articulation project were coordinated with (a) the Operations Staff at the State Department of Education, (b) curriculum directors in local schools, (c) administrators, (d) the Minnesota Instructional Materials Center, and (e) interested teacher educators.

CONCLUSION

After considering verbal and written feedback from administrators and instructors involved in each of the three pilots, the overall evaluation of the success of the articulation project for 1975-76 was positive. As a result, funds will be available for 1976-77 from the State Department of Education-Vocational Division, Operations Section, for implementing the regional articulation process in auto mechanics occupations throughout the State of Minnesota.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

As a result of project research and development activities this past year, several conclusions and recommendations can be made. The recommendations made in this chapter refer to (1) the role and responsibilities of the curriculum articulation project in relationship to the role and responsibilities of other state agencies and employees concerned with vocational curriculum development, and (2) the areas of curriculum related (a) service, and (b) research and development in which the State Department of Education may wish to provide leadership in the next five years.

CONCLUSIONS

It can be concluded that a procedure for developing articulation products for use Statewide has been developed and validated. The products are utilized on a regional basis according to an established articulation process which has been successfully used - throughout the developmental phase of articulation - in three regional pilot sites in Minnesota. Both the procedure for developing articulation products and the regional articulation process have been adopted, for continued articulation, by the State Department of Education - Vocational Division. Funds for auto mechanics articulation will be available statewide during 1976-77; the same articulation process will be followed as was developed this past year. Pilots will be conducted next year in clerical/secretarial occupations for the purpose of validating the articulation process (which was used in automotive occupations) in another program area. Three new program areas will be identified for task list and competency record development during 1976-77.

Curriculum articulation, as it occurs via the process described, provides the structure needed for a statewide curriculum development system for Minnesota. The system can be used on a continuing basis to update, revise and impact upon the quality of vocational curriculum throughout the state. Because of this capability, it is recommended that curriculum development activities be carefully planned and coordinated at the State Department of Education through careful delimitation of roles and responsibilities of Vocational Division agencies and employees. State supervisors have traditionally had as part of their responsibilities the role of initiating state activities (conferences, curriculum committees, etc.) that produce qualitative improvements in occupational curriculum for those program areas under their direct supervision. Recognizing the time commitments and the observed areas of strong contribution to Vocational Curriculum statewide, the following recommendations are made in regard to role delineation of Vocational Division agencies and employees:

State supervisors contribute to the emerging curriculum development system (Curriculum Articulation Project) by:

(a) identifying key persons who can contribute subject matter/occupational expertise
(b) attending many articulation project meetings during both the materials development and articulation implementation phases, for the purpose of (1) clarifying state policy as it applies to their areas of supervision and (2) communicating with teachers about subject matter issues
(c) making recommendations to the articulation project director/staff member so that information from the emerging system can be used by them in their roles as state supervisors.

Supervisors can utilize the information generated by the emerging curriculum development (Curriculum Articulation Project) system in the following ways:

(a) to identify occupational programs and areas of competency within those occupational programs where teachers need professional upgrading/updating; and then to supply opportunities to their teachers through conferences, courses, workshops,

mailings, etc.

(b) to assemble instructional materials where none are available and where teachers request help. This can be done by making small grants available to teachers for the development of instructional aids/teaching aids which can be used by other teachers in helping their students learn to perform certain tasks competently

(c) to identify equipment and facility needs of teachers at the local level

(d) to give assistance to emerging programs in new locations of Minnesota so that they will include content like other programs having the same occupational program title (e.g. medical secretary)

It is also recommended that the curriculum articulation project be funded in the future with the understanding that it has two major areas of responsibility. One area would be service to the State of Minnesota. The other area would be research and development. Under the service area, articulation of all program areas could be accomplished on a scheduled basis. (A recent survey of secondary and post secondary directors resulted in the naming of 36 program areas in which they perceived a need for immediate articulation assistance). Under the research and development area of project responsibility, new ways to meet the emerging challenges of Vocational Education could be developed. During the next five years it is anticipated that there will be a need for: (1) practical guidelines for competency assessment (regional construction of performance tests and regionally standardized written tests based on performance) (2) alternative program management strategies that accommodate open entry/open exit provisions, (3) worker mobility charts that can be used by vocational guidance counselors and vocational instructors to make vocational curriculum offerings meaningful to students, (4) content selection procedures for creating exploratory options which can be made available to students who are in the early stages (cluster exploration) of occupational decision making, (5) instrumentation and procedures for efficiently updating

curriculum articulation products, and (6) In-service procedures for new staff hired at the local level after the developmental phase of curriculum has been accomplished in that region.

SUMMARY OF THE REPORT

Time Covered by the Report

July 1, 1975 through June 30, 1976

Goal of the Project

The goal of this project is to develop and pilot a process for vertically articulating curriculum between the secondary and post secondary levels of vocational technical education throughout the state of Minnesota. This goal includes both (a) the development and validation of a procedure for developing those statewide products (task lists and competency records) needed for articulation and (b) the development of a process for teachers and administrators to follow as they utilize the articulation products through working with schools in their region of the state.

Procedures followed:

The five areas of research and development for the project included (I) Articulation product development, (II) Articulation process development, (III) Dissemination plan development, (IV) Production of publications needed for regional articulation, (V) Identification of data sources for updating articulation products in future years. Developmental research procedures are described in detail for each of the five areas.

Two service areas of the project were: (I) The coordination of articulation project activities with other agencies/institutions in the State of Minnesota and (II) Diffusion of project goals, information and products to other states that wish information and/or products developed through this funded project. Procedures followed in completing activities in the two service areas were undertaken primarily to support and increase the usefulness of project activities to Minnesota's vocational system as a

whole.

Results and Accomplishments:

A procedure for developing articulation products was developed and validated. A regional process for articulation was successfully piloted through the developmental phase of automotive mechanics articulation in three pilot sites in Minnesota. The dissimenation plan developed is funded by the State Department of Education - Vocational Division next year. The data sources for updating articulation products in future years appears to be cost effective at this time.

In regard to accomplishments in the service areas, five publications have been printed during this past year, and 12 additional publications are currently being printed. Diffusion of project goals, information and products was accomplished through audio visual media, conference participation in Minnesota and at the National level, person-to-person correspondence and publications of short articles in newsletters and clearinghouse bibliographies.

Evaluation:

Both the procedure for developing articulation products (task lists and competency records) on a statewide basis and the regional articulation process have been adopted by the State Department of Education - Vocational Division. Funds for auto mechanics articulation will be available statewide during 1976-77. Pilots will be conducted next year in clerical/secretarial occupations for the purpose of validating the articulation process (which was used in automotive occupations) in another program area. Three new program areas will be identified for task list and competency record development during 1976-77, because the evaluation of the project was positive.

Conclusions and Recommendations:

It can be concluded that continued articulation efforts are warranted in Minnesota along the same lines as those of recent years. It must be noted, however, that evaluation of the articulation process to date relates to its usefulness to teachers and administrators. No effect on students will be seen for two years.

Two recommendations are made as a result of this project. First, suggested future roles and curriculum related responsibilities of the Vocational Division's State Supervisors at the State Department of Education are noted, as they relate to curriculum articulation and development. Second, roles of employees of state funded projects that are concerned with vocational technical curriculum development and dissemination are recommended. It is suggested that in future years this project should have two areas of responsibility (a) service and (b) research and development. Some specific areas in which there will be a need for research and development during the next five years are cited in the recommendations chapter of this report.

PRODUCTS DEVELOPED BY

THE CURRICULUM ARTICULATION PROJECT TO DATE

1. Burger, Laura; Lambrecht, Judy; Allen, Deena; and Loebs, James: Handbook for Vocational Instructors Interested in Competency Based Education 1974. Research Coordinating Unit for Vocational Education, University of Minnesota, Minneapolis, Minnesota. (Available through ERIC, AIM/ARM, and MIMC)

2. Burger, Laura: Developing Articulated High School and Post High School Vocational Technical Curricula in Minnesota A Final Report, 1975. Research Coordinating Unit for Vocational Education, University of Minnesota, Minneapolis, Minnesota. (Available through ERIC)

3. Burger, Laura; Allen, Deena, and Loebs, James: Competency Based Route to Vertical Curriculum Articulation, 1975. Research Coordinating Unit for Vocational Education, University of Minnesota, Minneapolis, Minnesota. (Available through MIMC)

4. Automotive Task Lists - Automotive Mechanics, Service Center Mechanics, Lubrication Specialist, Exploratory Program for Auto Mechanics (1975). (Available through MIMC and AIM/ARM)

5. Clerical/Secretarial Task Lists: Office Services Aid, Typist, General Office/Typist, Secretary/Non-Shorthand, Secretary/Shorthand, Data Entry Operator, Medical Secretary, Legal Secretary, Educational Office Personnel, Correspondence Specialist and Administrative Assistant, Correspondence Supervisor. 1976 (Available through MIMC)

6. Terminal Performance Objectives for Competency Based Instruction. Automotive Mechanics Occupations. A directory was developed in each of the three pilot sites.

BIBLIOGRAPHY

Articulation Research Project, Articulation of Occupational Education Programs, James Sprunt Institute and the Duplin County Public Schools. James Sprunt Institute, Kenansville, N.C. 28349. Collection of Materials on Project. (Mimeographed).

Baker, Eva L. and Popham, W. James. Expanding Dimensions of Instructional Objectives. Englewood Cliffs, New Jersey; Prentice-Hall, Inc., 1973.

Kemp, Jerrold E. Instructional Design, A Plan for Unit and Course Development. Belmont, California: Fearon, 1971.

Mager, Robert F. and Beach, Kenneth M. Jr. Developing Vocational Instruction. Belmont, California: Fearon, 1967.

Mandy, Russell M. and Stapleton, Clement E. Articulation of Vocational Education Curriculum Between Secondary and Post Secondary Levels in Wisconsin. (Final Report, Project No. O.E.G. 5-74-0145). Minomonie, Wisconsin: University of Wisconsin, Stout, August, 1975.

McMahon, Gordon G. Curriculum Development in Trade and Industrial and Technical Education. Columbus, Ohio: Charles E. Merrill, 1972.

Owens, John and Chumbley, John. Auto Mechanics Program Articulation - Dallas and Tarrant Counties. Dallas: Division of Occupational Research and Development, Texas Education Agency, no date.

Popham, W. James. Systematic Instruction. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1970.

Popham, W. James. The Uses of Instructional Objectives - A Personal Perspective. Belmont, California: Fearon, 1973.

Popham, W. James and Baker, Eva L. Planning an Instructional Sequence. Englewood Cliffs, New Jersey: Prentice-Hall., Inc., 1970.

A Proposal Design for Improving Articulation Between Secondary and Post Secondary Occupational Programs in Dallas and Tarrant Counties. Arlington: Texas: Regional Planning for Occupational Education, no date.

Smith, Brandon B. and Moss, Jerome, Jr. Report of a Seminar: Process and Techniques of Vocational Curriculum Development. Minneapolis: Research Coordinating Unit for Vocational Education, University of Minnesota, April, 1970.

APPENDICES

APPENDIX A

Articulation Sessions (March - April 1976)

Rochester Region

Developmental phase

Three full days and six evening sessions were attended by auto mechanics instructors in the Rochester region of Minnesota. Mr. Coler Peterson (who is a member of the working committee that developed the automotive task lists and competency records and is a full time staff member at Rochester Area Vocational Technical Institute) provided leadership. The individuals who participated and the location of the schools from which they came are presented below:

Instructor	School
Coler Peterson, Consultant-on-site	Rochester AVTI
Don Stnelow	Rochester AVTI
Ralph Jewell	Rochester AVTI
Seevert Gronvold	Rochester AVTI
Max Gerand	Rochester AVTI
Glen Papenfuss	Dodge Center High School
Floyd Davidson	Hayfield High School
Dave Kennedy	Pine Island High School
Bill Lehn	Preston Vocational Center
Bill Tasaler	Stewartville High School
Don Laumb	Rushford Vocational Center
Vern Westbrook	Rochester - John Marshall High
Ron Felt	Rochester - Mayo High School

Articulation Sessions (June - July 1976)

East Grand Forks - Thief River Falls Region

Developmental phase

Five fulls days and one evening session were attended by auto mechanics instructors in the East Grand Forks - Thief River Falls region of Minnesota. Mr. Marson Rinkenberger (who is a member of the working committee that developed the automotive task lists and competency records and is a full time teacher at Crookston High School) provided leadership. The individuals who participated and the location of the schools from which they came are presented below:

Instructor	School
Marson Rinkenberger, Consultant-on-site	Crookston High School
Arly Hams	Red Lake Falls Center
Ken Henry	East Grand Forks Center
Terry Moe	East Grand Forks Center
Frank Mack	East Grand Forks AVTI
John Steinke	East Grand Forks AVTI
Ray Olsen	Thief River Falls AVTI
Alvin Aaseby	Thief River Falls AVTI
Duane Brown	Thief River Falls AVTI
Bill Bohn	Bagley Center
Clint Braaten	Bagley Center
Walter Wendler	Baudette
Jerry Molacek	Tri River Center
Marvin Gunderson	Agassiz Valley Center

Articulation Sessions (April - May 1976)

Duluth Public Schools

Developmental phase

Five full days of articulation sessions were attended by auto mechanics instructors from Duluth Public Schools, Duluth, Minnesota. Mr. Gary Zaudtke (who is a member of the working committee that developed the automotive task lists and competency records and is a full time staff member at Duluth Area Vocational Technical Institute) provided leadership. The individuals who participated and the schools from which they came are presented below:

Instructor	School
Gary Zaudtke, Consultant-on-site	Duluth AVTI
Willard Morris	Duluth AVTI
Vern Verhel	Duluth AVTI
Charles McDonald	Central High School
Bill Olson	Vocational Center
Joe McNamara	Service Station
Al Kurschner	Vocational Center
Tony Emanuel	East High School

4. If you were a student entering your district Technical Institute in the near future, would you have a need for your program to be Open Entry/Open Exit?

_____YES _____NO

5. Please explain your answer to the previous question:

6. If you were to attend your district Technical Institute on a full-time basis, how important would it be to you that your program is on an Open Entry/Open Exit format?

Critical importance. Would not attend if not Open Entry/ Open Exit. (1)	High importance. Might not attend if not Open Entry/ Open Exit. (2)	No opinion. Neutral. (3)	Low importance. Would probably attend if not Open Entry/OE. (4)	No importance. Would attend even if not Ope Entry/Open Exit (5)
___	___	___	___	___

7. Please comment on your answer to the previous question:

8. If you were to attend your district Technical Institute as a full-time student, what months would you prefer to enter? (Write the numbers 1,2,3, underneath your first 3 choices).

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	No preference
___	___	___	___	___	___	___	___	___	___	___	___	___

9. What months would you prefer to complete your studies or graduate? (Write the numbers 1,2,3, underneath your first 3 choices)

Jan.	Feb.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	No preference
___	___	___	___	___	___	___	___	___	___	___	___

THANK YOU!

APPENDIX B

OPEN ENTRY/OPEN EXIT RESEARCH PROJECT
Sponsored by Wisconsin Board of Vocational-Technical & Adult Education

THIS QUESTIONNAIRE IS PART OF A RESEARCH PROJECT ON OPEN ENTRY/OPEN EXIT EDUCATION BEING CONDUCTED AT SEVERAL MIDWESTERN TECHNICAL INSTITUTES AND COMMUNITY COLLEGES. RESULTS WILL BE USED BY EDUCATORS AND POLICYMAKERS TO IMPROVE THEIR EDUCATIONAL SYSTEMS FOR THE BENEFIT OF THEIR COMMUNITIES AND THEIR STUDENTS. ON BEHALF OF THOSE EDUCATORS, POLICYMAKERS, COMMUNITIES AND STUDENTS, YOU ARE THANKED FOR YOUR TIME AND COOPERATION.

NAME OF SCHOOL _____

YOUR POSITION(student, instructor, etc.) _____

If student, enrolled full or part-time? _____ Which program? _____

If student, do you also work? _____ Average number of hours worked per week is _____

DEFINITION:

A course or program is to be considered Open Entry/Open Exit if it fits into any of the following categories:

1. Allows a student to enter school at times other than the typical beginning of the school semester (for example: monthly or weekly) OR:
2. Allows a student to earn a grade, rating, diploma, or degree and leave the course or program before the typical end of the semester, OR:
3. Both of the above.

WITH THIS DEFINITION IN-MIND, WHAT PROGRAMS/COURSES HAVE YOU BEEN IN CONTACT WITH AT YOUR SCHOOL OR ARE IN CONTACT WITH NOW THAT ARE OPEN ENTRY/OPEN EXIT?

PLEASE READ EACH OF THE STATEMENTS BELOW AND INDICATE YOUR DEGREE OF AGREEMENT WITH EACH STATEMENT AS IT RELATES TO THE CONCEPT OF OPEN ENTRY/OPEN EXIT.

SA = Strongly Agree U = Undecided
A = Agree D = Disagree
SD = Strongly Disagree

	SA	A	U	D	SD
There is a need for student enrollment to be opened more than 3 or 4 times per year.	1	2	3	4	5
The Open Entry/Open Exit approach creates general confusion because students are enrolling and leaving school throughout the school year.	1	2	3	4	5
The Open Entry/Open Exit approach tends to lower our school's academic standards.	1	2	3	4	5
The Open Entry/Open Exit approach tends to attract students to our school.	1	2	3	4	5
Our faculty is enthusiastic about Open Entry/Open Exit.	1	2	3	4	5
The Open Entry/Open Exit approach appears to meet important demands and needs of the individual.	1	2	3	4	5
Our school can offer top quality educational services without utilizing the Open Entry/Open Exit approach.	1	2	3	4	5
Students enrollment procedures are complicated and troublesome with the Open Entry/Open Exit approach.	1	2	3	4	5
Open Entry/Open Exit provides the student graduate with better access to job openings.	1	2	3	4	5
There is a growing demand by adult students and potential adult students for Open Entry/Open Exit.	1	2	3	4	5
With the Open Entry/Open Exit approach, students are more inclined to withdraw from their programs and drop out of school.	1	2	3	4	5
Open Entry/Open Exit for students should not be encouraged.	1	2	3	4	5
I feel the Open Entry/Open Exit approach can work at this school.	1	2	3	4	5

APPENDIX B

(FOR PROFESSIONAL STAFF ONLY)

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

	SA	A	U	D	SD
The Open Entry/Open Exit approach is useful only for Non-Credit courses.	1	2	3	4	5
The approach tends to aid in the recruitment and retention of faculty.	1	2	3	4	5
We don't have the time to fully develop the Open Entry/Open Exit approach.	1	2	3	4	5
The approach is viewed as a passing fad by our faculty/staff.	1	2	3	4	5
Open Entry/Open Exit could endanger our school's accreditation.	1	2	3	4	5
The Open Entry/Open Exit approach is useful only in Diploma programs.	1	2	3	4	5
Most instructors feel that utilization of an Open Entry/Open Exit format is a possible threat to their jobs.	1	2	3	4	5
Our administration and staff do not have the know-how to successfully implement an Open Entry/Open Exit approach.	1	2	3	4	5
Our school should move toward initiating Open Entry/Open Exit in all diploma programs.	1	2	3	4	5
Open Entry/Open Exit operation permits better distribution of teacher work loads.	1	2	3	4	5
More staff is needed to implement the concept of Open Entry/Open Exit.	1	2	3	4	5
Open Entry/Open Exit should be limited to one or two programs as an experiment during the first year.	1	2	3	4	5
Instructors need considerable time for curriculum revision before attempting Open Entry/Open Exit.	1	2	3	4	5
Class size must be reduced to permit Open Entry/Open Exit of students.	1	2	3	4	5
The problem of reporting students' grades and attendance is aggravated by an Open Entry/Open Exit approach.	1	2	3	4	5
Open Entry/Open Exit makes it difficult for teachers to keep proper student records.	1	2	3	4	5
Scheduling of students is not a major problem.	1	2	3	4	5
A more efficient method must be developed to secure actual current student enrollment and student progress in each class.	1	2	3	4	5
Scheduling of teachers is a major problem with the Open Entry/Open Exit approach.	1	2	3	4	5
A department (e.g. the accounting department or the communications department) should not go to an Open Entry/Open Exit format unless the great[illegible]ty of teachers in that department are supportive.	1	2	3	4	5
A move toward Open Entry/Open Exit in all areas is necessary if our school is to meet the training and education demands of the communities we serve.	1	2	3	4	5

1. WHAT MONTH WOULD YOU HAVE PREFERRED TO ENTER YOUR PROGRAM AS A FULL-TIME STUDENT? (IF YOU ARE NOT A STUDENT SELECT THE MONTH YOU FEEL MOST FULL-TIME STUDENTS WOULD PREFER)
** (Write the numbers 1,2,3, underneath your first 3 choices)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	No preference
___	___	___	___	___	___	___	___	___	___	___	___	___

2. WHAT MONTH WOULD YOU PREFER TO COMPLETE YOUR STUDIES OR GRADUATE? (IF YOU ARE NOT A STUDENT, SELECT THE MONTH YOU FEEL MOST FULL-TIME STUDENT WOULD PREFER)
** (Write the numbers 1,2,3, underneath your first 3 choices)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	No preference
___	___	___	___	___	___	___	___	___	___	___	___	___

3. AS DEFINED ON THE FIRST PAGE OF THIS QUESTIONNAIRE, OPEN ENTRY/OPEN EXIT MEANS THAT A STUDENT COULD ENTER A COURSE OR PROGRAM PERHAPS MONTHLY OR WEEKLY AND/OR COULD LEAVE THAT COURSE OR PROGRAM WHEN COMPLETED. TO WHAT EXTENT DO YOU FEEL OPEN ENTRY/OPEN EXIT PROGRAMS WOULD BE BENEFICIAL TO STUDENTS ENTERING OUR SCHOOL? (CHECK ONE ANSWER ON LINE PROVIDED)

Extremely beneficial	Highly beneficial	Beneficial	Some benefits	No benefits
1.___	2.___	3.___	4.___	5.___

4. FOR YOU, AS A STUDENT, IS IT ESSENTIAL THAT YOUR PROGRAM BE ON AN OPEN ENTRY/OPEN EXIT FORMAT? (IF YOU ARE NOT A STUDENT, SELECT THE ANSWER YOU FEEL WOULD APPLY TO MOST STUDENTS AT YOUR SCHOOL.)

_____YES, is essential that my program be Open Entry/Open Exit.

_____NO, is not essential that my program be Open Entry/Open Exit.

5. PLEASE EXPLAIN YOUR ANSWER TO THE PREVIOUS QUESTION:

6. FROM THE STUDENT'S VIEWPOINT, WHAT DO YOU FEEL IS THE MOST IMPORTANT REASON FOR HAVING AN OPEN ENTRY/OPEN EXIT APPROACH AT OUR SCHOOL?

CIRCLE ONE LETTER:
a. Those seeking entry into school can enter more easily, with minimum waiting.
b. Instruction is usually individualized when the program is Open Entry/Open Exit.
c. The student is able to complete a program in less time and seek work sooner.
d. From the student's viewpoint, there are no important reasons for Open Entry/Open Exit.
e. Other (specify)_____
f. No opinion

7. FOR STUDENTS ONLY: WHAT COMMENTS WOULD YOU LIKE TO MAKE REGARDING THE OPEN ENTRY/OPEN EXIT APPROACH AS YOU HAVE EXPERIENCED IT AT YOUR SCHOOL?
(use back of sheet if necessary)

(FOR PROFESSIONAL STAFF ONLY)

8. FROM SOCIETY'S OR THE COMMUNITY'S VIEWPOINT, WHAT DO YOU FEEL IS THE MOST IMPORTANT REASON FOR HAVING AN OPEN ENTRY/OPEN EXIT APPROACH AT OUR SCHOOL?

CIRCLE ONE LETTER:

a. Schools could accommodate more students for the same or less cost.
b. Job openings would be filled more quickly.
c. Graduating students--whether first-time job seekers or those being retrained--would spend less total time in school and would enter the work force more quickly.
d. From society's or the community's viewpoint, there are no important reasons for Open Entry/Open Exit.
e. Other (specify) _____
f. No opinion.

9. HOW FEASIBLE IS THE OPEN ENTRY/OPEN EXIT (OE/OE) APPROACH FOR AN ASSOCIATE DEGREE PROGRAM?

CHECK ONE ANSWER ON LINE PROVIDED:

Extremely feasible. All Associate Degree programs should be OE/OE. Extremely high benefits to individuals and society.	Very feasible and very beneficial. Appears to apply to Associate Degree programs.	Somewhat feasible. Applies to Associate Degree programs. Somewhat beneficial to individuals and society.	Not feasible. Doesn't appear to apply to Associate Degree programs. No benefits.	Definitely not feasible nor beneficial. Does not belong with Associate Degree programs.
1.____	2.____	3.____	4.____	5.____

10. HOW FEASIBLE IS THE OPEN ENTRY/OPEN EXIT APPROACH FOR A DIPLOMA PROGRAM?

CHECK ONE ANSWER ON LINE PROVIDED:

Extremely feasible. All Diploma programs should be OE/OE. Extremely high benefits to individuals and society.	Very feasible and very beneficial. Appears to apply to Diploma programs.	Somewhat feasible. Applies to Diploma programs. Somewhat beneficial to individuals and society.	Not feasible. Doesn't appear to apply to Diploma programs. No benefits.	Definitely not feasible nor beneficial. Does not belong with Diploma programs.
1.____	2.____	3.____	4.____	5.____

11. WHAT SPECIFIC PROGRAM AREAS (ASSOCIATE DEGREE OR DIPLOMA) DO YOU FEEL LEND THEMSELVES BEST TO THE OPEN ENTRY/OPEN EXIT APPROACH?

12. WHAT PROGRAM AREAS (ASSOCIATE DEGREE OR DIPLOMA) DO NOT LEND THEMSELVES TO THE OPEN ENTRY/OPEN EXIT APPROACH?

WHY?

13. IN WHAT PROGRAM AREAS IS THERE THE GREATEST NEED FOR OPEN ENTRY/OPEN EXIT?

WHY?

(FOR PROFESSIONAL STAFF ONLY)

14. HOW DO YOU, IN YOUR POSITION, VIEW THE RELATIONSHIP BETWEEN TOTAL COSTS AND TOTAL BENEFITS WHEN THE OPEN ENTRY/OPEN EXIT APPROACH IS COMPARED TO THE TRADITIONAL APPROACH?

CHECK ONE ANSWER ON LINE PROVIDED:

Extremely favorable. Costs much lower in relationship to benefits received.	Highly favorable. Costs somewhat lower in relation to benefits received.	The relationship is about the same as with the traditional approach.	Somewhat unfavorable. Costs somewhat higher in relation to the benefits received.	Extremely unfavorable. Costs very high compared to benefits received.
1._____	2.____	3._____	4._____	5._____

15. POSSIBLE ADVANTAGES ASSOCIATED WITH OPEN ENTRY/OPEN EXIT INCLUDE ECONOMIC ADVANTAGES--LESS TIME SPENT IN JOB PREPARATION, ON THE JOB MORE QUICKLY; COMMUNITY ADVANTAGES SUCH AS BETTER SERVICE; AND ADVANTAGES TO INDIVIDUALS, EMPLOYERS, AGENCIES SUCH AS CETA, ETC. WHICH OF THESE, OR OTHERS, DO YOU THINK ARE THE MAJOR ADVANTAGES OF THE OPEN ENTRY/OPEN EXIT APPROACH?

PLEASE COMMENT:

16. DISADVANTAGES OFTEN ASSOCIATED WITH OPEN ENTRY/OPEN EXIT INCLUDE HIGH COSTS (FACILITIES, INSTRUCTIONAL, SUPPORTIVE), PROBLEMS WITH CURRICULUM, CONTROL, SCHEDULING OF STUDENTS, STAFF, FACILITIES; NECESSITY FOR CONTINUOUS LARGE ENROLLMENTS IN PROGRAMS, ETC. ,WHICH OF THESE, OR OTHERS, DO YOU THINK ARE THE MAJOR DISADVANTAGES OF THE OPEN ENTRY/OPEN EXIT APPROACH?

PLEASE COMMENT:

17. WHAT ADDITIONAL COMMENTS WOULD YOU LIKE TO MAKE REGARDING THE OPEN ENTRY/OPEN EXIT APPROACH AS YOU HAVE EXPERIENCED IT?

IN ORDER TO ACHIEVE OPEN ENTRY/OPEN EXIT, MANY SCHOOLS HAVE INDIVIDUALIZED THEIR INSTRUCTION. THE FOLLOWING QUESTIONS ARE IN REGARD TO INDIVIDUALIZED INSTRUCTION AS IT IS USED TO ACHIEVE OPEN ENTRY/OPEN EXIT. THE TERM INDIVIDUALIZED INSTRUCTION AS USED HERE IS DEFINED AS THAT INSTRUCTION WHICH ALLOWS A STUDENT TO PROCEED AT HIS/HER OWN PACE AND/OR PROVIDES FOR ALTERNATIVE METHODS OR PATHS TO LEARNING THE SAME OBJECTIVE.

PLEASE INDICATE YOUR REACTIONS TO THE FOLLOWING STATEMENTS REGARDING INDIVIDUALIZED INSTRUCTION AS IT RELATES TO OPEN ENTRY/OPEN EXIT.

SA = Strongly Agree
A = Agree
U = Undecided
D = Disagree
SD = Strongly Disagree

	SA	A	U	D	SD
Individualized instruction allows more freedom for the student to set his/her own learning pace.	1	2	3	4	5
Students do not work up to their full capacity.	1	2	3	4	5
Individualized instruction allows a more realistic and practical experience for the student.	1	2	3	4	5
Does not provide sufficient motivation to the slow learner.	1	2	3	4	5
Not enough opportunity for classroom discussion and exchange of ideas.	1	2	3	4	5
Student is taught to be independent.	1	2	3	4	5
Supervision over the learning process and learning progress is lacking.	1	2	3	4	5
Students do not have enough contact time with instructors.	1	2	3	4	5
The student is not held back because of any other student.	1	2	3	4	5
Students lack motivation to complete the required course work.	1	2	3	4	5
Individualized instruction produces an atmosphere that facilitates learning.	1	2	3	4	5
Does not allow usage of a variety of teaching techniques.	1	2	3	4	5
Student is allowed freedom to choose areas of concentration within each particular course.	1	2	3	4	5
Some students have a tendency to cover material too quickly with the result that the knowledge is not retained.	1	2	3	4	5
The course objectives are clearly understood by the student.	1	2	3	4	5
Students can avoid unnecessary review.	1	2	3	4	5
Lack of materials forces some students to wait until someone else is finished with the materials.	1	2	3	4	5
Individualized instruction is a cause of students dropping out of school.	1	2	3	4	5
Students gain more knowledge/skill per unit-of-time input.	1	2	3	4	5
Results in more satisfactory placement of our school graduates.	1	2	3	4	5

	SA	A	U		
Does not allow for a meaningful grading of students' performance.	1	2	3	4	5
Through credit by examination allows recognition of learning that took place outside the formal classroom or in other schools.	1	2	3	4	5
Benefits to all involved are greater than the drawbacks.	1	2	3	4	5

1. WHAT LEVEL OF MOTIVATION DO YOU FEEL IS REQUIRED OF A STUDENT TO SUCCEED IN AN INDIVIDUALIZED INSTRUCTION (I-I) SETTING?

CHECK ONE ANSWER ON LINE PROVIDED:

Absolutely none. Student will succeed in I-I without motivation.	Very little motivation required to succeed in I-I.	Average motivation required of student to succeed in Indiv. Instruction.	High motivation required to succeed in Individualized Instruction.	Very high motivation necessary for student to succeed in Indiv. Instruction.
1.____	2.____	3.____	4.____	5.____

2. WHAT PERCENT OF THE STUDENTS AT OUR SCHOOL HAVE SUFFICIENT MOTIVATION IN AN INDIVIDUALIZED INSTRUCTION SETTING?

_____ less than 25%

_____ 25% to 50%

_____ 50% to 75%

_____ over 75%

3. IS INDIVIDUALIZED INSTRUCTION (I-I) A FACTOR IN KEEPING STUDENTS FROM WITHDRAWING FROM OUR SCHOOL BEFORE THEIR PROGRAM IS COMPLETED?

CHECK ONE ANSWER ON LINE PROVIDED:

Critically important. Without Individualized Instruction, would definitely withdraw.	Highly important. Without I-I, would consider withdrawing.	Important. Tends to keep students from withdrawing.	Not important. Would most likely complete program if instruction not individualized.	Absolutely not important. Would complete program even if instruction not I-I.
1.____	2.____	3.____	4.____	5.____

4. PLEASE INCLUDE ANY COMMENTS YOU WISH TO MAKE REGARDING INDIVIDUALIZED INSTRUCTION AS YOU HAVE EXPERIENCED IT.

APPENDIX C

EMPLOYER/AGENCY QUESTIONNAIRE

OPEN ENTRY/OPEN EXIT RESEARCH PROJECT
Sponsored by the Wisconsin Board of Vocational-Technical & Adult Eduction

NAME_____ POSITION_____

COMPANY/AGENCY_____

DEFINITION: A course or program is to be considered Open Entry/Open Exit if it fits into any of the following categories:

1. Allows a student to enter school at times other than the typical beginning of the school semester (for example, student enrollment could take place weekly or monthly).

OR:

2. Allows a student to earn his/her grade, rating, diploma, or degree and leave the course or program whenever all coursework has been completed.

OR:

3. Both of the above.

1. With this definition in mind, to what extent do you feel Open Entry/Open Exit programs at the Technical Institute would be beneficial to your organization? CHECK ONE ANSWER ON LINE PROVIDED:

mely beneficial (1)	Highly beneficial (2)	Beneficial (3)	Some benefits (4)	No benefits (5)	Not applicable (6)
___	___	___	___	___	___

2. From your point of view, do you believe that your district Technical Institute should be on an Open Entry/Open Exit format?

(1) _____YES (2) _____No Opinion (3) _____NO

WHY?

3. To what extent do you feel Open Entry/Open Exit programs (as defined above) would be beneficial to students entering your district Technical Institute? CHECK ONE ANSWER:

nely beneficial (1)	Highly beneficial (2)	Beneficial (3)	Some benefits (4)	No benefits (5)	Not applicable (6)
___	___	___	___	___	___

4. From society's or the community's viewpoint, what do you feel is the most important reason for having an Open Entry/Open Exit approach at your district Technical Institute?
CIRCLE ONE LETTER:

a. Schools could accommodate more students for the same or less cost.
b. Job openings would be filled more quickly.
c. Graduating students--whether first-time job seekers or those being retrained--would spend less total time in school and would enter the work force more quickly.
d. From society's or the community's viewpoint, there are no important reasons for Open Entry/Open Exit.
e. Other(specify)_____
f. No Opinion

5. To what extent do you feel your employees are presently using your district Technical Institute's courses and programs?

_____Not applicable

_____Approximate number, if known:_____employees out of a work force of_____

_____Less than 5% of our employees enroll each year.

_____6-25% of our employees enroll each year.

_____over 25% of our employees enroll each year.

6. What do you feel would be the usage by your employees if all courses and programs offered by your district Technical Institute were on an Open Entry/Open Exit format?
CHECK ONE ANSWER:

Usage greatly increased (1)	Usage somewhat increased (2)	No change, about the same usage (3)	Usage somewhat decreased (4)	Usage greatly decreased (5)
___	___	___	___	___

Not applicable.
(6)
___

For your organization, the anticipated majority of hiring of new full-time permanent employees over the next five years will be in the occupational area of: (Please list the areas and circle the preferred months for hiring)

_____Not Applicable

OCCUPATIONAL AREA	MONTH
a. _____	Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec., No preference
b. _____	Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec., No preference
c. _____	Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec., No preference
d. _____	Jan. Feb. March April May June July Aug. Sept. Oct. Nov. Dec., No preference

What changes in your organization's recruitment and hiring of Technical Institute graduates do you forsee if those graduates were available throughout the year rather than only at the end of each semester?
(If your organization is already hiring Technical Institute graduates of programs which are Open Entry/Open Exit, please check here_____and indicate what your reaction has been since you have become aware of the changeover).

_____Not applicable

_____Increase in recruitment efforts

_____No change in recruitment efforts

_____Decrease in recruitment efforts

Please comment on any of the previous nine questionnaire items. You may also wish to comment on the general concept of Open Entry/Open Exit as it applies to you and your organization.

APPENDIX D
INTERVIEW OUTLINE

INTRODUCTION

Reasons for Interview - project background - will leave survey instrument

Definitions of Open Entry/Open Exit

Identification of existing Open Entry/Open Exit course, programs.

Any existing or recent courses offered both OE and Traditional?
Any done previously but discontinued?
Of existing, format individualized or short courses?
Is year-round required to go Open Entry/Open Exit?
(if not, what do with students)

Open Entry/Open Exit one of the goals - or by-products - of Individualized Instruction (Define) (Must go I-I to get Open Entry/Open Exit)

Original motivation - Impetus

Outside forces? Financial assistance? How, what, when, etc.

Outside help necessary today?

WHY OPEN ENTRY/OPEN EXIT

Service - fill needs? Demands? What are the indicators?
(part-time usage, satellite school usage, waiting lists, etc.)

Full-time students - Associate Degree (have? Why? 4 semester still required, used?).
- Diploma - which programs?
- What does student gain? (Ease of entry, saved time, better access to jobs, ??)

Part-time students - Same

Those already employed - use to improve or acquire skills/knowledge?
- how measure demand? how measure usage?

Job seekers preparing to return to job market?

Employers, agencies (Voc. rehab., WIN, CETA)?

EFFECTIVENESS

Has been measured? How? Hard data available, where?

Attrition (one possible and important measure) what available? by course, by program. Can we get--before and after Open Entry/ Open Exit?

Other possible measures - data available? - achievement, (gains, trends, differences)
- enrollment, time in program, etc.
- How many enroll early (does Open Entry act as recruitment device?)
- Any programs down since Open Entry?
- breakdown by full, part-time, age.
- enrollment data valid under Open Entry?
- grads and placement
- trends before, after. Of grads, completers. Compare to enrollment in programs. How many exit early?

Costs - another important measure. Have been identified? Can compare? (per instructional hour, unit completed, graduate, satisfactorily place grad?)
- lower?
- instructional (with para-professionals included) load formula changes resulted in higher costs? additional staff because of year-round? differences in software, hardware support costs, staff support, other in-direct costs.

- facility costs - less because of increased usage? More for labs, centers, hardware?

- hardware - differences in requirements, costs.

- developmental costs (software included) - time and dollar costs, prorated per student or FTE?

- supportive costs - student services, administrative, library?

INSTRUCTIONAL EFFECTS (if individualized instruction used to attain Open Entry/Open Exit)

What studies already done?

Effects on:

1. Staff--tends to promote instructor growth, development? Eliminates instructor boredom, stagnation? Evaluation done by team?
   --aid or hinder in recruitment, retention of instructional staff?
   --problems with instructor adaptability, role change?

2. Students--students properly motivated? Motivation demands different from those of traditional approach? increases student motivation?

3. Curriculum--**relationship between instructional objectives and job entry performance requirements? (How done? by whom?)
   --translation of job requirements to curriculum and instruction?
   --promotes uniformity in course objectives taught by different instructors - prevents overlap in courses?

4. Instructional Delivery Systems
   --Requires more or less day-to-day preparation by instructor?
   --approach itself results in increased paperwork for instructor, division and department chairmen, student services, student, etc.?
   --increases student-instructor time spent one-to-one?
   --problems with cheating? - one student "specializing" in an assignment, then exchanging with classmates?
   --learning style mapping--inportance of?
   --learning materials and activities-shortage of esp. when beginning? staff not qualified to develop?
   --how handle lab scheduling - esp. where work with large items such as autos, appliances, tractors?

5. Learning Environment
   --attitude teaching - e.g. by major instructors - Lost?
   --transfer responsibility to student? promotes learning atmosphere?
   --orientation of students - necessary? successful? how done?

6. Evaluation-management system
   --use computer in registration, grading, attendance, instruction itself, testing, etc.?
   --problems with student grading? Mastery approach? grading contracts?
   --problems with instructor accountability? Blame goes to system?

Other:

From above, what are problem areas - curriculum, facilities students, staff?

From instructional standpoint, major strong points, advantages are? major weak points, disadvantages are?

General student view of instructional effects; instructor view.

MISCELLANEOUS

Counseling - How done with Open Entry/Open Exit? - division (dept.) basis? role of faculty advisor change? more important? how handle? Release time? Dollars?

Prerequisite problem - course sequence. How ensure that a necessary prerequisite re-related course (e.g. blueprint reading, Tech Math) is taken at proper time, before student gets into advanced major courses?
How handled if student drops course?

Recording of units of instruction when completed. Recording of student progress. How done? by fraction of credit, whole credit only? Keep on record until course complete? Or put on record only when complete?

Registration problems. New tuition policy. Effects on Open Entry, re-enrollment?

Waiting lists - how common? - problems with, e.g. "tracking down"?

Facility problems?

Equipment problems and space for equipment?

Relationship between Open Entry curriculum and secondary school curriculum. Different? how done? to what extent? what programs?

Problems with receipt of state aids based on FTE's? Now credits, must change to hours? what about co-op students? New procedures?

Para-professional - Needed? What do?

GUIDELINES/SUGGESTIONS

How assess needs/demands? What tools, indicators?

Full commitment required? Including year-round?

Where should motivation to go Open Entry/Open Exit come from?

Who responsible for developing over-all plan? Implementing?

What about over-all management system?

Time schedule?

Begin with certain programs? What criteria used to decide? (Waiting lists, enrollment increases, employer demand, etc.)

How establish job entry performance levels? Who does?

What changes in facilities: Library, A-V Labs, learning centers, classrooms, shops, labs, other?

What about changeover problems? Instructo /staff acceptance? facility changes? Supporting services?

Cost estimating? Budget requirements?

Student numbers needed--tie in with year-round?

Developmental work - Who does? When? How? e.g. individualized instruction (establishing objectives, course and unit; preparing learning activities, materials, grading contracts, assessment procedures, learning style identification, etc.?)

Establishing faculty loads, problems with increased student contact hours?

Enlisting faculty/staff support.

Keeping faculty/staff informed of plan, changeover.

Scheduling - students, classrooms

Problems to be expected.

How handle other problems that have been discussed in interview.

APPENDIX D

SAMPLES

Plans

Curriculum materials

Learning Activities

Student assessment and grading systems - including attendance

What tried and discarded?

What now being used?

Should be revised?

Problems with?

Advantages?

Disadvantages?

Costs - time, effort, dollars?

Efficient? How determined?

Effective? How determined?

APPENDIX E

MORAINE PARK - AVT LAB TIME CARD

Student Name | Social Security Number | Course Number | Course Name

MORAINE PARK TECHNICAL INSTITUTE

AVT LAB TIME CARD

Week Ending | Hours This Week

Student Name

ELAPSED TIME

TIME

IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT IN OUT

APPENDIX F

INSTRUCTOR SIGNATURE TIME CARD

W.S. Number _____

Name _____

Scheduled Time _____ **To** _____

Course No.	Time Out
Instr. Sign.	Time In
Course No.	Time Out
Instr. Sign.	Time In
Course No.	Time Out
Instr. Sign.	Time In
Course No.	Time Out
Instr. Sign.	Time In
Course No.	Time Out
Instr. Sign.	Time In

APPENDIX G

WELDING STUDENT ACHIEVEMENT RECORD

figure 2

"A" WELDING STUDENT ACHIEVEMENT RECORD

SHOP NUMBER _____

NAME _____

ADDRESS _____
street

_____
city state zip

AGE _____ TELEPHONE _____
(after
SEX _____ 5:00)-- _____

EMPLOYER if working:

_____

WORK SCHEDULE _____

SPONSORING AGENCY (if any):

_____

"B" ENROLLMENT DATA

Start date _____

End date _____

Hours and days:
start

M T W R F S

end

MODULES ENROLLED FOR:
1 2 3 4 5 6 7
8 9 10 (circle)

Segments of modules (if any) specify

_____

Total course length in hours _____

ATTENDANCE

Date	Sched.	Actual	Date	Sched.	Actual

"C" ACHIEVEMENT AND ATTENDANCE

MODULE 1 FUNDAMENTALS		MODULE 7 HORIZONTAL	
SMAW-1		SMAW-7	
SMAW-1a (Hours to		SMAW-7a	
SMAW-1b complete)		SMAW-7b	
SMAW-1c		SMAW-7c	
total hours		total hours	
MODULE 2 WEAVING		MODULE 8 VERTICAL	
SMAW-2		SMAW-8	
SMAW-2a		MAW-8a	
total hours		SMAW-8b	
MODULE 3 OXY ACET. CUTTING		SMAW-8c	
SMAW-3		SMAW-8d	
SMAW-3a		total hours	
total hours		MODULE 9 OVERHEAD	
MODULE 4 INTRO JOINTS		SMAW-9	
SMAW-4		SMAW-9a	
SMAW-4a		SMAW-9b	
SMAW-4b		MODULE 10 QUALIFICATION	
total hours		SMAW-10	
MODULE 5 E-7024		SMAW-10a	
SMAW-5			
SMAW-5a		total hours	
SMAW-5b		MA011U Mathematics	
SMAW-5c			
MODULE 6 BUTT JOINTS		MM034V Blue Print Reading	
SMAW-6			
SMAW-6a		TOTAL HOURS IN COURSE	
SMAW-6b			

APPENDIX H

AUTO MECHANICS - 48 WEEK VOCATIONAL

	9-2-75 10-10-75	10-13-75 11-21-75	11-24-75 1-16-76	1-20-76 2-27-76	3-1-76 4-9-76	4-12-76 5-28-76	6-1-76 7-9-76	7-12-76 8-13-76
DAYS:	29	28	28	29	30	27	28	25
OP	NS AUTO Engines (25)	NS AUTO Drive-Chassis (25)	NS AUTO Steer-Susp. (25)	NS AUTO Brakes (25)	NS AUTO Fuel Systems (25)	AUTO Elec. I (25)	AUTO Tune-up (25)	AUTO Elec. II (25)
	PPLIED COMMUNICATION (5)		MATH I (5)		HUMAN RELATIONS (5)		APPLIED WELDING (6)	
							APPLIED MACHINE SHOP (4)	

NS - New Students may enter if openings exist.

All students will be "graded out" of the courses at the end of the block and will immediately proceed into the next course as scheduled. If a "NC" is received for any of these courses, it will be necessary to re-register for that course again at a later date.

APPENDIX I

FOOD SERVICE CALENDAR TENTATIVE

1975-1976 School Year — June 13, 1975

3 WEEK SESSIONS

September 2 - September 19	14 days
September 23 - October 10	15 days
October 13 - October 31	15 days
November 3 - November 26	16 days
December 1 - December 19	15 days
December 22 - January 16	12 days
January 21 - February 6	13 days
February 9 - February 27	15 days
March 1 - March 19	15 days
March 22 - April 9	15 days
April 12 - May 14	17 days
May 17 - June 3	13 days
June 7 - June 25	15 days
June 28 - July 16	14 days
July 19 - August 6	15 days

4 WEEK SESSIONS

September 2 - September 26	19 days
September 30 - October 24	20 days
October 27 - November 26	21 days
December 1 - January 9	22 days
January 12 - February 6	18 days
February 9 - March 5	20 days
March 8 - April 2	20 days
April 5 - May 14	17 days
May 17 - June 11	18 days
June 14 - July 9	19 days
July 12 - August 6	20 days

6 WEEK SESSIONS

September 2 - October 10	29 days
October 13 - November 26	31 days
December 1 - January 16	27 days
January 21 - February 27	28 days
March 1 - April 9	30 days
April 12 - June 3	30 days
June 7 - July 16	29 days

9 WEEK SESSIONS

September 2 - October 31	44 days
November 3 - January 16	43 days
January 21 - March 19	43 days
March 22 - June 3	45 days
June 7 - August 6	44 days

18 WEEK SESSIONS

September 2 - January 16	87 days
January 21 - June 3	88 days

20 WEEK SESSIONS

September 2 - February 6	100 days
February 16 - July 16	99 days

TENTATIVE VACATIONS — July 17, 1975

DATES	
September 1, 1975	Labor Day
November 6 & 7	Convention
November 27 & 28	Thanksgiving
December 24 - January 2	Christmas
January 19 & 20	In-Service
April 16	Good Friday
April 19 & 23	Easter
May 6 & 7	Convention
May 31	Memorial Day
June 4	Preparation Day
July 5	July 4

APPENDIX J

PROGRESS CHART

NAME _____ UNIT TEST AVERAGE _____

PROGRAM _____ IND. MATH _____ COMPREHENSIVE AVERAGE _____

DATE ENTERED _____ DATE COMPLETED _____ FINAL AVERAGE _____ FINAL GRADE _____

_____

COMPREHENSIVE EXAMS

1 2 3 4 5 6

_____

UNIT TESTS

NO.	PRE	A	B	C	NO.	PRE	A	B	C
1					41				
2					42				
3					43				
4					44				
5					45				
6					46				
7					47				
8					48				
9					49				
10					50				
11					51				
12					52				
13					53				
14					54				
15					55				
16					56				
17					57				
18					58				
19					59				
20					60				
21					61				
22					62				
23					63				
24					64				
25					65				
26					66				
27					67				
28					68				
29					69				
30					70				
31					71				
32					72				
33					73				
34					74				
35					75				
36					76				
37					77				
38					78				
39					79				
40					80				

ATTENDANCE

WEEK	M	T	W	TH	F
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					

APPENDIX K

FVTI - APPLIED COMMUNICATIONS I PROGRESS RECORD

Grading and Check-Off Sheet

Starting Date _____

Ending Date _____

Course Grade _____

Soc. Sec. No. _____

_____
Last Name First Middle

Program _____ Phone _____

Address _____

Instructor _____ Hour _____

THE WORLD WHEELS - Baker & Osdol

UNIT NO.	SPELLING UNITS	GRADE	DATE
G1			
G2			
G3			
G4			
G5			
G6			
G7			
G8*	Automotive Tape 1		
	Tape 2		
G9	Welding and Metal Fab		
G10	Machine Shop		
G11	Printing		
	Industrial Design Part A		
	Part B		
	Part C		
	Part D		
G52	Diesel Mechanics Tape 1		
	Tape 2		
S3	Claim and Adjustment Letters		
W34	Claim Letters		
W35	Adjustment Letters		
S4	Credit Principles, Procedures, Letters		
W36			
W37			
W38			
W39			
S5	Collection Letter Series		
W40	Collection Series		
S6	Job Getting Sequence		
W31			
W32			
W33			

*G8 - G11--The one unit in your field required

I. Getting into Gear

	SP	SP
1		
2		

II. Machine & Man (and Woman)

	SP	SP
1		
2		

III. To Market, to Market

	SP	SP
1		
2		

IV. Road Tests

	SP	SP
1		
2		

V. Safety Matters

	SP	SP
1		
2		

VI. Overviews

	SP	SP
1		
2		

VII. Fiction on Wheels*

	SP	SP
1		
2		

VIII. Poetry on Wheels

	SP	SP
1		
2		

* write critique of story

DATE	ORAL	WRITTEN (REPORTS)
1		
2		
3		
4		
5		
6		

APPENDIX K (continued)

APPLIED COMMUNICATIONS PROGRESS RECORD

	SEMINAR	DATE	GRADE	ASSIGNED MATERIAL	DATE	GRADE
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Seminar S-1--S-6 required

Seminars can be added at the instructors discretion.

UNITS	VALUE
SEMINARS	
TESTS	
FINAL EXAM	
FINAL GRADE	
HOURS PRESENT	
HOURS ABSENT	

APPENDIX L

FOX VALLEY TECHNICAL INSTITUTE - RESTAURANT & HOTEL COOKERY

APPLICATION PROFILE OF LEARNING ACTIVITIES

BAKING

518:114

Quick Breads & Pudding	Rating
Baking Powder Biscuits Scones	
Plain Muffins w/variations	
Corn Muffins	
Corn Bread - Yankee Style	
Coffee Cake, Quick	
Streusel Topping	
Peach Bread Pudding	
Blanc Manger	
Chocolate Pudding	
Creamy Rice Pudding	
Tapioca Cream Pudding	
Vanilla Cream Pudding	
Apple Brown Betty	
Gelatin Vanilla Whip	

Yeast Breads & Rolls	
White Bread	
Old Fashioned Molasses Bread	
Cinnamon Roll Bread	
Parker House Rolls	
Rye Bread	
Pumpernickel Bread	
Sesame Seed Buns	
Poppy Seed Rolls	

Sweet Yeast Doughs	
Yeast Raised Donuts	
Cake Donuts	
Golden Donuts	
Bismarks	
Cinnamon Rolls	
Long Johns	
Butterfly Rolls	

Topping	
Pan Glaze	
Vanilla Water Icing	
Cinnamon Sugar Mix	
Honey Topping	

Cakes & Icings	Rating
Yellow Plain Cake	
Applesauce Cake	
Banana Cake	
Chocolate Cake	
Easy Chocolate Cake	
Devils Food Cake	
Golden Chiffon Cake	
Lemon Coconut Cake	
Pound Cake	
Sponge Cake	
White Cake	
Cooked Frosting	
Vanilla Cream	
Butter Cream	
Cocoa Fudge	
Caramel Fudge	
Marshmallow	

Cookies	
Chocolate Brownies	
Butterscotch Brownies	
Chocolate Drop Cookies	
Chocolate Oatmeal	
Coconut Bars	
Peanut Butter	
Sugar Cookies	
Butterscotch Oatmeal	
Chocolate Chip	

Fruit Pies	
Apple	
Blueberry	
Cherry	
Blackberry	
Raspberry	
Mincemeat	
Raisin	
Dutch Apple	
French Apple	
Pecan	

Cream Pies

Banana		Lemon	
Vanilla		Butterscotch	
Chocolate		Coconut	

BAKERY EQUIPMENT	Frequencies					Level of Skill Development						
	Never	Seldom	Frequent	Considerable	Always	0	1	2	3	4	5	6
Bakers Utility Store (Gas)												
Trunion												
Donut Fryer												
Donut Machine												
Proofing Cabinet												
Convectio Ovens (Gas)												
Electric Bun Cutter & Rounder												
Mixer 80 Qt.												
Mixer 20 Qt.												
Mixer 10 Qt.												
Mixer 5 Qt.												
Refrigerator												
Freezer												
HAND TOOLS (VARIOUS)												
Bench Scraper												
Bowl Knives												
Cake Saws												
Dough Divider												
Bakers Scale												
Pastry Wheel												
Rolling Pins												
Vienna Knife												
Pastry Bags & Tubes												
Bismark Filler												
Pie Crimper												
Turntable												

APPENDIX L (continued)

FOX VALLEY TECHNICAL INSTITUTE GRADE EQUIVALENTS

LETTER GRADE	NUMBER GRADE	DACUM SCORING SCALE
A	94 and up	Can perform this task with more than aceptable speed and quality, with initiative and adaptability and can lead others in performing this task.
B+	91-93	Can perform this task with more than acceptable speed and qaulity with initiative and adaptability to special problem situations.
B	87-90	Can perform this task satisfactorily without supervision or assistance with more than acceptable speed and quality of work.
C	80-86	Can perform this task satisfactorily without assistance and/or supervision.
Non-Acceptable		Can perform this task satisfactorily but requires periodic supervision and/or assistance.
Non-Acceptable		Cannot perform this task satisfactorily for participation in a work environment.

FOOD SERVICE OCCUPATIONAL LEVEL OF SKILL DEVELOPMENT

6 Proficient (Highly). Performing in a given art, skill, or branch of learning with expert correctness and facility. Proficiency implies a high proficiency degree of competence through training.[1]

5 Proficient (Considerable). Implies a considerable proficiency degree of competence.

4 Competent-Employable (High Productivity). Implies more than adequate for entry level.

3 Competent-Employable (Low Productivity). Properly or well qualified; capable. Adequate for the purpose; suitable ; sufficient. Legally qualified or fit; admissible for entry level.[2]

2 Moderately involved. Industrous, but less than 80% accomplishment within prescribed competency standard.

1 Slightly involved. Active, but less than 50% accomplishment within prescribed competency standard.

0 Exposed. Low significance, less than 30% accomplishment within prescribed competency standard.

Introduced
Expresses student obtained only awareness of knowledge presented. (e.g. media, field trips, etc.)

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[1] W. Robert Houston, "Exploring Competency Based Education"; Board of Regents of the University of Houston, 1974, P.14

[2] Ibid, p. 14

APPENDIX L (continued)

EVALUATION SHEET (Course Composite)

Student Name _____ Date _____

Social Security Number _____

Address _____

Phone _____

Course No. 518-____ Course Title _____

(Hrs. Present ____ of ____ Required)

	EVALUATION	Score	Letter Grade	Occupational Rating
10%	Pre/Post Review (____) (____) (____) (____)	____	____	____
20%	Weekly Reviews (____) (____) (____) (____) (____) (____) (____) (____) (____) (____) (____) (____)	____	____	____
70%	Mastery of Skill: (Composite Scores)	____	____	____
	*Handtools & Stationary Equipment (Psychomotor)	____	____	____
	*Application Profile of Learning Activities (Cognitive)	____	____	____
	*Personal Characteristics/Skill Traits (Affective)	____	____	____
	FINAL COURSE GRADE	____ /	____ /	____

____ / _____ _____

I.S.S. Initial Student Signature Instructor's Signature

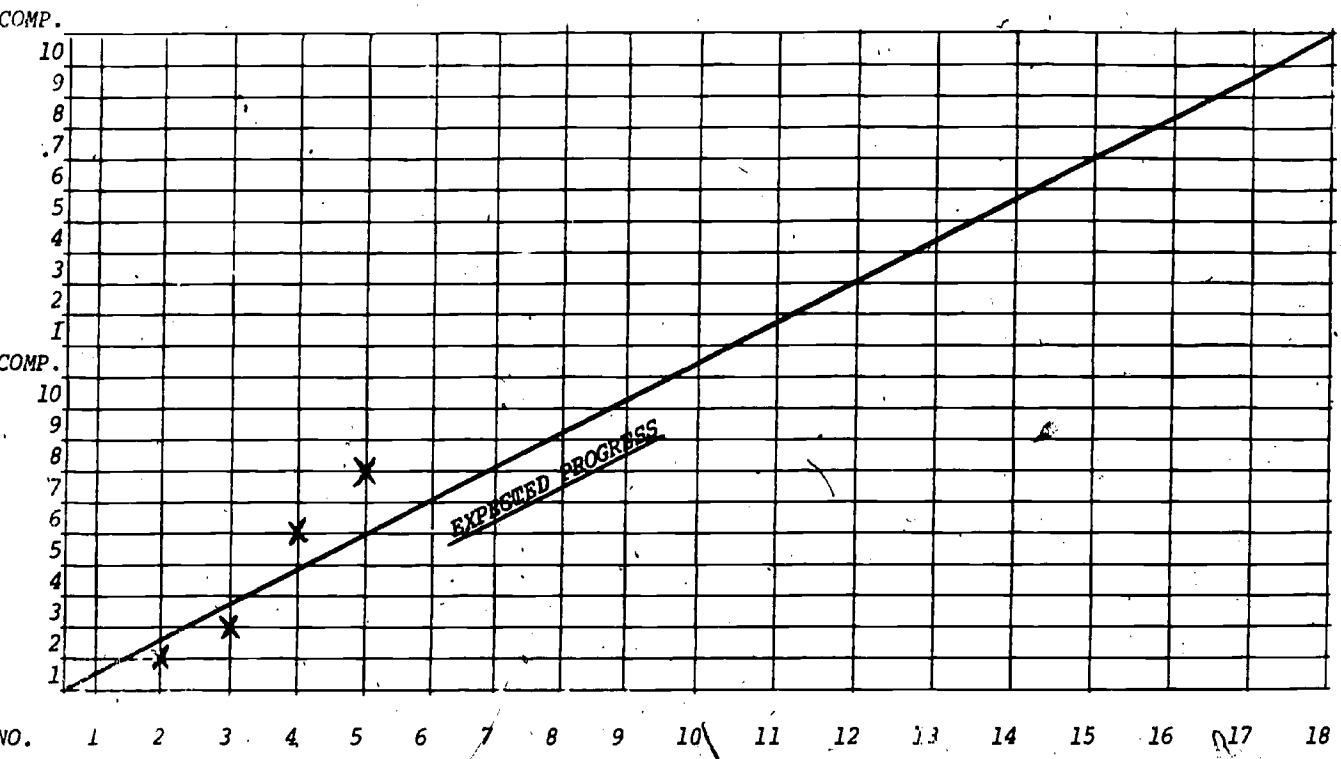
Student Course Evaluation Completed (Initial) ____ YES or NO (circle one)

COMMENTS: _____

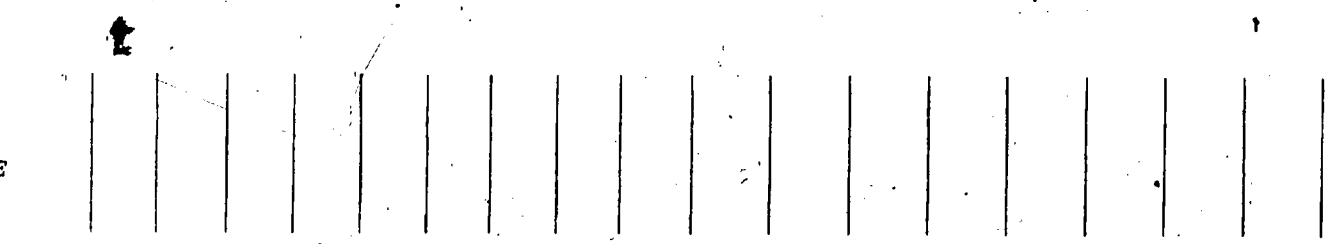
cc: Student File via I.S.S.

APPENDIX M

EXPECTED PROGRESS REPORT



ACTUAL TESTS



NAME: _____