DOCUMENT RESUME

ED 124 771 95 CE 007 399

TITLE	A Study for the Articulation of Competency-Based Curricula for the Coordination of Vocational-Technical Education Programs in Louisiana. Final Report. Volume I.
INSTITUTION	Louisiana State Dept. of Education, Baton Rouge. Div. of Vocational Education.
SPONS AGENCY	National Center for Educational Research and Development (DHEW/OE), Washington, D.C.
REPORT NO	VT-102-997
BUREAU NO	V0258VZ
PUB DATE	May 76
GRANT	OEG-0-74-1744
NOTE	78p.; For related documents, see CE 007 399-404
EDRS PRICE	MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS	*Articulation (Program); *Curriculum Development; Curriculum Evaluation; Handicapped Students; Junior Colleges; *Performance Based Education; Physically Handicapped; Post Secondary Education; Secondary Education; State Curriculum Guides; State Programs; *Statewide Planning; *Vocational Education; Vocational Schools
IDENTIFIERS	Louisiana

ABSTRACT

Objectives of the project were: (1) to develop statewide articulated competency-based curricula in selected vocational education programs, (2) to develop a plan for coordinating instruction between high schools, vocational schools, and colleges, (3) to determine standards for levels of competencies of selected curricula, (4) to provide instructors with guidelines indicating achievement levels, and (5) to identify problem areas in curriculum models for special needs students. Following a literature review, collection of data from schools and employers, and assessment of guides in current use, articulation advisory committees were formed. Although interest was high in the group, signed articulation agreements were not achieved. Curriculum guides were developed and field tested for five vocational areas: air conditioning/refrigeration, drafting occupations, electronics, nursing occupations, and office occupations. Evaluation results are shown for each of the three institutional levels, and 80% of the 153 instructors said that they would use the guides. Revised guides were disseminated in the State. Also reported are the results of an assessment of programs for special needs students in vocational schools. A bibliography is included in the document. Appendixes contain a task inventory for nurse assistant, field test and special needs assessment questionnaires, and a list of special needs instructional materials. (BG)

Final Report

Project No. V0258VZ
Grant No. OEG-0-74-1744

A STUDY FOR THE ARTICULATION OF COMPETENCY-BASED CURRICULA FOR THE COORDINATION OF VOCATIONAL-TECHNICAL EDUCATION PROGRAMS IN LOUISIANA

Volume I of six volumes

Gertrude M. Enloe, Ed. D.
Louisiana State Department of Education
Bureau of Vocational Education
P. O. Box 44064, Capitol Station
Baton Rouge, Louisiana 70804

May 1976

The research reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

National Center for Educational Research and Development

Table of Contents

List of Tables

Abstract

The purposes of this project were: (1) to develop state-wide articulated competency-based curricula in selected vocational-technical educational programs, (2) to develop a plan for coordinating instruction, (3) to determine standards for levels of competencies of selected curricula, (4) to provide instructors with guidelines indicating levels of achievement, and, (5) to identify problem areas in curriculum models for the special needs students. Competency-based curricula were developed in the areas of: (1) Air Conditioning-Refrigeration, (2) Drafting, (3) Electronics, (4) Nursing, and, (5) Office Occupations. Articulation Advisory Committees included representatives from the three institutional levels and business and industry. The high interest expressed by this group was not accompanied by definite plans for change. Eighteen educators, from the three institutional levels developed the competency-based curricula during the Summer, 1975. Preliminary guides were field tested and revised copies were mailed to all vocational educators in the five areas developed. From the data collected, the following conclusions are made: (1) Data bases revealed few reports concerning articulation of occupational education programs, (2) competency-based materials are being used in the areas of Office Occupations, Nursing, and Air Conditioning-Refrigeration in the schools of Louisiana, (3) eighty percent of the instructors reported that they would use the guides developed by this project. Articulation must be established if a vocational-education continuum is to be realized.

ACKNOWLEDGEMENTS

The project staff would like to thank the following people for their contributions to the implementation of this project and development of the curriculum guides.

ARTICULATION ADVISORY COMMITTEES

Allen, William J.
Administrator
Highland Hospital, Inc.
1006 Highland Avenue
Shreveport, Louisiana

Beason, Rita K.
Nursing Instructor
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Bernard, Jessie
Guidance Counselor
Natchitoches Central High School
P. O. Box 32
Natchitoches, Louisiana

Bridges, Marion
Drafting Instructor
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Caskey, Lois D.
Nursing Instructor
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Chambers, George R.
Electronics Instructor
Sowela Technical Institute
Rt. 4, Box 246-R
Lake Charles, Louisiana

Clay, John
Engineer
Arkla Gas Company
515 Marshall Street
Shreveport, Louisiana

Deason, Mary
Graduate Assistant
Northwestern State University
Natchitoches, Louisiana

Falgout, John
Principal
Lake Charles High School
1509 Enterprise Blvd.
Lake Charles, Louisiana

Haley, James R.
Principal
DeRidder High School
1200 West 10th Street
DeRidder, Louisiana

Hardamon, Sue
Office Occupations Teacher
Natchitoches Central High School
700 Parkway Drive
Natchitoches, Louisiana

Hardt, Howard P.
Professor
School of Engineering & Technology
McNeese State University
Lake Charles, Louisiana

Harper, Mary
Assistant Director
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Hidalgo, Vernon
Electronics Teacher
Barbe High School
Rt. 1, Box 13-AA
Iowa, Louisiana

House, John W.
Electronics Teacher
Sulphur High School
605 University Drive
Lake Charles, Louisiana

Jernigan, Frank
Assistant Superintendent
Calcasieu Parish School Board
1724 Kirkman Street
Lake Charles, Louisiana

Jeter, Willard
Electronics Instructor
McNeese State University
Lake Charles, Louisiana

Kirkalits, O. Carroll, Ph.D
Dean
School of Engineering and Technology
McNeese State University
Lake Charles, Louisiana

Leibetter, Peggy, Ed. D.
Head
Northwestern State University
College of Nursing
College Avenue
Northwestern State University
Natchitoches, Louisiana

Lewis, Patsy B.
Director
Division of Admissions, Basic and Career Studies
Louisiana Tech University
Ruston, Louisiana

Lively, Edwin
Coordinator
Lake Charles Activities
Continental Oil Company
Room 319, Pioneer Building
Lake Charles, Louisiana

Madden, R. G.
Vocational Education Supervisor
Bossier Parish School Board
P. O. Box 218
Benton, Louisiana

Martin, Jack
Administrator
Bossier City General Hospital
2105 Airline Drive
Bossier City, Louisiana

McElwee, Tandy W., Ph.D.
Head
Testing Department
Northwestern State University
Natchitoches, Louisiana

McGowan, Andrew, Jr.
Electronics Instructor
Sowela Technical Institute
1418 Grein Avenue
Lake Charles, Louisiana

Moffett, Zelma
Guidance Counselor
Natchitoches Central High School
1200 Phillips Street
Natchitoches, Louisiana

Moreno, Victor M.
Moreno's Inc., A/C - Heating
2106 East Broad Street
Lake Charles, Louisiana

Murphy, Mike
State Farm Insurance
100 Melrose Avenue
Natchitoches, Louisiana

Newton, Jim
Guidance Counselor
Lake Charles High School
1509 Enterprise Blvd.
Lake Charles, Louisiana

Offer, William F.
Louisiana State Department of Public Works
1138 Graystone Drive
Shreveport, Louisiana

Oglesby, Billie
Guidance Counselor & Nurse Educator
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Orr, Fred
Guidance Counselor
Sowela Technical Institute
501 Broad Street
Lake Charles, Louisiana

Ponder, Lloyd
Director
Natchitoches Trade School
934 East 5th Street
Natchitoches, Louisiana

Pyles, Sue
Teacher of LPN Nursing Program
Jonesboro-Hodge High School
225 Pershing Highway
Jonesboro, Louisiana

Rachal, Ruth
Head, Department of Nursing
Natchitoches Trade School
College Avenue
Natchitoches, Louisiana

Rast, Alva
Director
Shreveport-Bossier Vocational-Technical Center
3010 North Market Street
Shreveport, Louisiana

Slater, O. A.
Principal
Natchitoches Central High School
721 Watson Drive
Natchitoches, Louisiana

St. Amant, Louise
Graduate Assistant
Northwestern State University
Natchitoches, Louisiana

Thibodeaux, Lee
Assistant Director
Sowela Technical Institute
501 Broad Street
Lake Charles, Louisiana

Townsend, Dorothy
Teacher
Coushatta High School
P. O. Box 443
Coushatta, Louisiana

Tucker, Dolores
Instructor in Office Occupations and Special Needs
Natchitoches Trade School
P. O. Box 2141
Natchitoches, Louisiana

Vandersypen, John
Coordinator, Career Education
Natchitoches Parish School Board
Natchitoches, Louisiana

Vaughn, W. F.
Community Relations Representative
PPG Industries
P. O. Box 1000
Lake Charles, Louisiana

White, P. O.
Director
Sowela Technical Institute
501 Broad Street
Lake Charles, Louisiana

Williams, Betty
Office Occupations Instructor
Central Area Trade School
415 Lee Street
Natchitoches, Louisiana

Williams, Roger
Peoples Bank & Trust Company
708 Parkway Drive
Natchitoches, Louisiana

CURRICULUM WRITING COMMITTEES

Bolmarcich, Robert
A/C Refrigeration Instructor
McNeese State University
Lake Charles, Louisiana

Bridges, Marion M.
Drafting Instructor
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Brown, Lowell
Drafting Teacher
Byrd High School
3201 Line Avenue
Shreveport, Louisiana

Crawford, Katherine
Instructor of Nursing
Northwestern State University
Confederate Memorial Medical Center
Shreveport, Louisiana

Hardamon, Sue
Office Occupations Teacher
Natchitoches Central High School
700 Parkway Drive
Natchitoches, Louisiana

Henry, H. L., Jr.
Department Head
Industrial Engineering and Computer Science
Louisiana Tech University
Ruston, Louisiana

Hidalgo, Vernon
Electronics Teacher
Barbe High School
Rt. 1, Box 13-AA
Iowa, Louisiana

House, John W.
Electronics Teacher
Sulphur High School
605 University Drive
Lake Charles, Louisiana

McGowan, Andrew
Electronics Instructor
Sowela Technical Institute
1418 Grein Avenue
Lake Charles, Louisiana

Montgomery, Willie
A/C Refrigeration Teacher
Sulphur High School
Sulphur, Louisiana

Murphy, Louise B.
Instructor of Nursing
Louisiana Tech University
Ruston, Louisiana

Oglesby, Billie
Guidance Counselor and Nurse Educator
Shreveport-Bossier Vocational-Technical Center
2010 North Market Street
Shreveport, Louisiana

Rachal, Ruth
Head, Department of Nursing
Natchitoches Trade School
College Avenue
Natchitoches, Louisiana

Simon, Nolan D.
A/C Refrigeration Instructor
Baton Rouge Vocational-Technical School
3400 Winbourne Avenue
Baton Rouge, Louisiana

Stockwell, Charles M.
Electronics Instructor
McNeese State University
Lake Charles, Louisiana

Townsend, Dorothy
Teacher
Coushatta High School
P. O. Box 443
Coushatta, Louisiana

Tucker, Dolores
Instructor in Office Occupations
and Special Needs
Natchitoches Trade School
P. O. Box 2141
Natchitoches, Louisiana

Williams, Betty
Office Occupations Instructor
Central Area Trade School
415 Lee Street
Natchitoches, Louisiana

We extend special thanks to the staff members of the Vocational Curriculum Development and Research Center for their assistance in the implementation of this project.

CHAPTER I--INTRODUCTION

Enabling legislation passed in the 1973 Louisiana Legislature, which was designed to expand and improve vocational-technical education in Louisiana, made it imperative that the Bureau of Vocational Education, Louisiana State Department of Education, provide the leadership in developing state-wide articulated competency-based curricula in vocational education to be used as a guide at all institutions from the secondary, post-secondary, and college levels. It was evident there existed a lack of coordination and articulation between the types of institutions offering vocational education.

OBJECTIVES OF THE STUDY

Since there existed a lack of articulation and coordination between the three institutional levels, secondary, post-secondary vocational-technical schools, and colleges offering associate degree programs in vocational education, one of the objectives of this project was to develop standardized competency-based curricula in vocational education.

The expansion programs in vocational education, as a result of federal legislation, has not been accompanied by the necessary articulation and coordination within and between the institutional levels. A second objective of this project was to develop a plan for coordinating instruction between high schools, vocational-technical schools, and colleges through the use of standardized competency-based curricula. High priority in this project was the development of a design to improve institutional placement of students to avoid duplication in curriculum offerings which would insure maximum utilization of funds.

The differing philosophies of vocational education leaders have increased the numbers and levels of programs required to achieve a certain skill level. Because of the various requirements, students are not able to move from one level to another without suffering time, money, or credit loss. The requirements, at the present time, for job entry into a vocation are time-oriented and do not relate to the competency of the individual seeking the position. The clock-hour approach in vocational education is out-of-date. It was necessary to develop specific performance objectives or skill levels for the training programs to replace the clock or credit-hour as a measure of the success of a training program. The third objective of this project was to determine standards for levels of competencies of selected curricula within vocational education areas.

Vocational education program content taught by different instructors in the various schools does not have the same level of achievement standards. As a result of previous educational training and experience, the instructors of the various vocational

education programs are not unified regarding the levels of competencies students should attain after a specific time limit. Transfer students enrolled in a secondary school vocational education program should be able to determine, at any time, the levels of training programs relative to post-secondary programs. Levels of competency could be used for advanced placement in a post-secondary or collegiate program. Students enrolled in a secondary vocational education program should not be penalized when transferring to a post-secondary institution by being required to start at the introductory level course. The fourth objective of this project was to provide instructors with guidelines indicating levels of achievement for each selected vocational education program.

One purpose of the expansion of program offerings in vocational education was an attempt to take care of special groups such as the disadvantaged and handicapped in our society. A study was needed to determine the curriculum needs of students who cannot enter or succeed in the regular vocational education programs. The fifth objective of this project was to identify problem areas in curriculum models for the special needs students and to formulate guidelines for these students in the competency-based areas developed.

DEFINITIONS OF TERMS

In the interest of clarity and reference, a few terms are briefly described with regard to their usage in this project report.

Articulation refers to the relationships between educational programs offered on the three institutional levels studied--secondary, post-secondary vocational-technical school, and colleges offering associate degree programs in selected vocational-technical areas.

Vertical articulation refers to those relationships which exist between institutions and provides a coordinated program for a student moving from one educational competency level to the next. This project addressed itself to vertical articulation.

Competency-based curricula refers to curriculum guides developed in the areas of Air Conditioning-Refrigeration, Drafting, Electronics, Nursing, and Office Occupations. All objectives are stated in behavioral or performance-based terms indicating exit points for entry level jobs.

CHAPTER II--METHODOLOGY

The Louisiana State Department of Education had the authority to implement this project, as outlined in Grant Number OEG-0-74-1744. Legislation was enacted in the 1974 Louisiana Legislature establishing a Vocational Curriculum Development and Research Center in Natchitoches, Louisiana, under the State Board of Education. It was the opinion of vocational education personnel in the Bureau of Vocational Education, Louisiana State Department of Education, that the newly established Curriculum Center would be the logical site for the implementation of this project for the development of competency-based curricula in the field of vocational education.

Project activity began in the Curriculum Development and Research Center August 15, 1974 and continued through April 15, 1976.

Personnel employed to implement the project were a Director from the Bureau of Vocational Education, State Department of Education, three part-time Research Assistants, from the Northwestern State University Graduate School, and a full-time Secretary.

The implementation of the project activities and development of the competency-based curricula was accomplished in ten phases:

Phase 1--a review of the literature and an assessment of the state-of-the-art locally and nation-wide regarding articulation activities in the area of vocational education.

Phase 2--collection of data on all secondary, vocational-technical schools, and colleges offering associate degree programs in vocational education. Letters explaining the study and soliciting cooperation were sent to officials in the Local Education Agencies, Post-Secondary Vocational-Technical Schools and Colleges in September, 1974. Samples of existing curriculum guides, lesson plans, etc., used by vocational educators in Louisiana were collected and studied. Selected educators from the three institutional levels were interviewed in an attempt to determine discrepancies and overlapping curricula in secondary and post-secondary schools.

Phase 3--collection of data from employers in business and industry regarding competency-level skills for vocational education. These employers were interviewed to determine how well the skills of entry-level employees from our vocational education programs meet the manpower needs in Louisiana. A special effort was made to determine whether or not the skills taught for entry-level positions in Nursing Assistants jobs correlated with the tasks performed in the hospitals, clinics, and nursing homes in Louisiana. Using the task inventory for Nursing Assistants, developed by V-TECS (Vocational-Technical Education Consortium of States), an

inquiry was sent to all instructors of Nursing Assistant programs in the State. A questionnaire, containing the task inventory was mailed to a stratified random sample of hospitals, clinics, and nursing homes requesting validation of the stated tasks giving the interviewees an opportunity to include additional tasks performed by the Nursing Assistants employed at their health care center. (Appendix A)

Phase 4--selection of articulation advisory committee members for each vocational education area selected for study. The composition of each committee included instructors from the three institutional levels, administrators, guidance counselors, and representatives from business and industry. The initial meeting of each committee addressed itself to the problems of vertical articulation. Subsequent meetings were devoted to the tasks of developing tentative plans for articulation agreements between the three institutional levels.

Phase 5--developing competency-based curriculum guides in the areas of Air Conditioning-Refrigeration, Drafting, Electronics, Nursing, and Office Occupations. Superintendents of local education agencies, Directors of the vocational-technical schools, and Deans of colleges offering associate degree programs were contacted by letter and in person requesting names of potential curriculum writing team members. Each committee included four members, a chairperson, and one educator from each of the three institutional levels. The first drafts for field testing were developed during the Summer of 1974 (June-August).

Phase 6--dissemination of field review copies of competency-based curricula developed by the curriculum writing committees. Each instructor in the areas of Air Conditioning-Refrigeration, Drafting, Electronics, and Nursing were mailed a field review copy. Due to the number of vocational educators in the field of Office Occupations, a field review copy was sent to all instructors in the area vocational-technical schools and colleges and a stratified sample of Office Occupations teachers in the secondary schools. (Appendix B)

Phase 7--revision of competency-based curricula including recommendations submitted by reviewers. All recommendations were considered by the curriculum writing committee members and changes were made by committee action when it was deemed feasible to improve the guides.

Phase 8--dissemination of final copy of competency-based curricula. Each administrator and vocational educator in the area of Air Conditioning-Refrigeration, Drafting, Electronics, and Nursing received a copy. All Office Occupations administrators and instructors on the post-secondary levels were submitted a copy of the final edition but only the vocational teachers on the secondary level received the curriculum guide.

Phase 9--identification of problem areas in the curriculum models for the special needs students. Visits were made by the Project Director and Research Assistant to the thirty-three vocational-technical schools in the State to assess the programs in existence for students who are unable to enter and succeed in a regular program. An attempt was made to develop guidelines for the disadvantaged and handicapped students. A questionnaire was completed for each school (Appendix C) and results tabulated and analyzed.

Phase 10--preparation and submission of the final report.

CHAPTER III--RESULTS

REVIEW OF RELATED LITERATURE

As indicated by the selected bibliography, a rather exhaustive review of the literature was made and used in the initial phase of this project. Materials on articulation programs and the development and use of competency-based instructional materials were received from twenty states. Requests for materials were mailed to the fifty Research Coordinating Units in each State Education Agency.

A search of the Research In Education (RIE) and Current Index to Journals in Education (CIJE) data bases revealed fewer reports which specifically address secondary and post-secondary articulation of occupational education programs. Many dissertations have been written on articulation problems relating to academic education.

In reviewing the literature received, Florida, Texas, New York, and Oregon are the leaders in the articulation movements.

Problems of articulation presented by McKinnerney (1974) included admission policies and requirements, lack of performance testing, transfer of courses, and lack of communication between the institutional levels. Bender (1973) reports the results of two national surveys to determine the perceptions of key State officials on the status of articulation of secondary and post-secondary occupation education programs in each State. Findings clearly indicated, "Separatism still exists with the nature and degree of difficulty in articulation directly related to the relationships of the agencies involved." It was revealed that State organizational structure had a significant impact on the articulation of secondary and post-secondary occupational education. A search of the literature revealed an articulation agreement between the State Universities and the Public Community Junior Colleges of Florida. This report was not limited to occupational education but it encompassed total education. Markowitz (1973) reports the results of a study undertaken to prepare a plan for the articulation for those educational programs for nursing-related health occupations for which the Connecticut Division of Vocational Education shares responsibility. Conclusions were that nursing articulation is feasible and practical. One of the recommendations was that through task analysis a standardization of behavioral objectives and competency requirements for nursing-related educational programs be undertaken.

Morgan and Patterson (1973) states that articulated programs in agricultural education should do a better job of preparing students, and in a shorter span of time. An articulation process can be initiated at any level within an educational organization regardless of whether the organization is a high school, area vocational school, technical institute, or community junior college. Follow-up of students revealed the following: (1) students

are required to take similar work at secondary and post-secondary institutions; (2) loss of credit between similar institutions; and (3) duplication of parts or entire courses.

From the abundance of materials collected from within the State of Louisiana, only one guide revealed an attempt had been made to articulate occupational training programs. Outline of T & I Courses Common to Calcasieu Parish Schools and Sowela Technical Institute, 1972, is prefaced by the following rationale:

> Recognizing the need for a cooperative effort in Vocational Education in order to avoid duplication of services, representatives of the Calcasieu Parish School System and Sowela Technical Institute held a series of meetings to coordinate the curriculums so that they would complement each other.
>
> The two curriculums are so coordinated that the basics of any common program are covered at the high school level, and the more advanced technical training is available at Sowela Tech.
>
> The student who continues his studies at Sowela Tech will receive credit for the knowledge and skill already obtained in high school.

ASSESSMENT OF STATE-OF-THE-ARTS LOCALLY

Curriculum materials were received from twenty-one of the sixty-seven Local Education Agencies in response to the request. Only thirty-one percent of the agencies cooperated in this effort as shown in Table 1, page 8. Only three LEA's submitted instructional guides which were competency-based and these were in the area of Office Occupations.

Table 1

Responses from Local Education Agencies

Parish (LEA)	# Schools Responding	# Curriculum Guides	Performance-Based	Non-Performance-Based
Beauregard	1	1	1	
Bienville	1	1		1
Bossier	1	5		5
Caddo	2	3		3
Calcasieu	1	3		3
Catahoula	1	2		2
Concordia	1	2		2
Iberia	3	2		2
Iberville	2	9	1	8
Jackson	1	1		1
Jefferson	1	1		1
Lafayette	2	6		6
Lafouche	3	5		5
Lincoln	1	2		2
Plaquemines	2	2		2
Richland	1	3		3
St. Bernard	1	1	1	
St. Landry	1	5		5
Terrebonne	1	2		2
Union	1	1		1
West Feliciana	1	1		1
Totals (21)	29	58	3	55

Twenty-five of the thirty-three Directors of the Post-Secondary Vocational-Technical Schools responded to the request and cooperated in submitting curriculum guides being used in their schools in the areas of Air Conditioning-Refrigeration, Drafting, Electronics, Nursing, and Office Occupations, giving a seventy-five percent return from this population as shown in Table 2, page 9. Competency-based curricula are being used in eight of the vocational-technical schools reporting, in the areas of Office Occupations (5), Nursing (2), and Air Conditioning-Refrigeration (1).

Table 2

Responses from Post-Secondary Vocational-Technical Schools

	# Curriculum Guides	Performance-Based	Non-Performance-Based
Alexandria Trade School	3		3
Baton Rouge Vocational-Technical School	5		5
Central Area Trade School	1		1
Concordia Parish Trade School	1		1
Delta Area Vocational School	3		3
Evangeline Area Tri-Parish Vocational-Technical School	3		3
Florida Parishes Vocational School	4		4
Gulf Area Vocational-Technical School	5		5
Hammond Area Vocational School	4		4
Jefferson Davis Vocational-Technical School	2	1	1
Jefferson Parish Vocational-Technical School	5		5
Memorial Area Vocational School	3		3
Natchitoches Trade School	1		1
North Central Area Vocational-Technical School	3	1	2
Northeast Louisiana Vocational School	3		3
Opelousas Area Vocational School	1		1
Orleans Area Vocational-Technical School	4		4
Ouachita Valley Technical Institute	1	1	
Sabine Valley Vocational-Technical School	4		4
Shreveport-Bossier Vocational-Technical Center	5	1	4
South Louisiana Trade School	5	1	4
Southwest Louisiana Vocational-Technical School	4		4
Sullivan Vocational-Technical School	5	1	4
Westside Vocational-Technical School	3	1	2
Young Memorial Vocational-Technical School	2	1	1
Totals (25)	80	8	72

Responses were received from fourteen of the thirty-four colleges (41%) as indicated in Table 3. Three of the colleges are using competency-based instructional materials in Office Occupations Associate Degree programs.

Table 3

Responses from Colleges

Name of College	# Curriculum Guides	Performance-Based	Non-Performance-Based
Four-Year Public:			
Grambling State University	3	1	2
LSU in Shreveport	1		1
Louisiana Tech University	2	1	1
McNeese State University	2		2
Nicholls State University	1		1
Northeast Louisiana University	1	1	
Northwestern State University	2		2
Southeastern Louisiana University	2		2
University of Southwestern Louisiana	1		1
Two-Year Public:			
LSU at Alexandria	1		1
Southern University--Shreveport-Bossier City Campus	3		3
Four-Year Nonpublic:			
Centenary College of Louisiana	1		1
Louisiana College			
Our Lady of Holy Cross College	1		1
Totals (14)	21	3	18

Data in Table 4, page 11 indicate a need for the development of competency-based instructional materials. A careful review of the scope and sequence of the program areas studied revealed non-consistency especially in the areas of Electronics and Nursing curriculums.

Table 4

Number and Percentage of Total Responses

Institutional Level	Reporting Number	Percentage	Number Curriculum Guides	Performance-Based	Non-Performance-Based
Local Education Agencies	21	31%	58	3	55
Post-Secondary Voc-Tech Schools	25	75%	80	8	72
Colleges	14	41%	21	3	18
Totals	60	44%	159	14	145

ARTICULATION ADVISORY COMMITTEES

Forty-six educators, administrators, guidance counselors, and people from business and industry served on the committees to study and plan for the articulation of programs in the five vocational-technical areas studied. The meetings were held throughout the State near locations of programs offered on the three instutional levels. The attendance and interest in this phase of the work was rewarding to the project staff. Everyone agreed that the implementation of articulation agreements would improve the coordination of vocational-education programs and students would profit from the arrangements, but due to the State organizational structure and different funding sources, it was impossible to secure signed agreements for student transfer credits and sharing equipment, facilities, and faculty. Advance placement tests are available at the Post-Secondary Vocational-Technical Schools and Colleges, but due to the difference in levels of the present curricula used, students are not advised to take the tests. This is especially true in the field of Electronics. Applied math is taught on the Post-Secondary Vocational-Technical School level while pure math is emphasized on the collegiate level. Business and industry representatives on the committees expressed a desire and need for better graduates of our programs for potential employees.

Communication between institutions affects the students' transition. The committees agreed on the need for improving communication especially in the area of counseling.

DEVELOPMENT AND FIELD TESTING COMPETENCY-BASED CURRICULA

Eighteen educators completed the competency-based curricula in the areas of Air Conditioning-Refrigeration, Drafting, Electronics, and Office Occupations. Some of the writers did not continue with this work until it was completed. The development phase was

implemented during the Summer of 1975 (June through August). The curricula were field tested during the months of September, October, and November, 1975. A questionnaire (Appendix B) accompanied each curriculum guide and follow-up letters were mailed to all non-respondents, November 4, 1975. A total of 153 responses were received in the five areas; 21 in Air Conditioning-Refrigeration, 21 in Drafting, 19 in Electronics, 21 in Nursing, and 71 in Office Occupations.

Responses from instructors of Air Conditioning-Refrigeration. Of the 21 responses received, ten were from teachers in secondary school programs, nine were from instructors in post-secondary vocational-technical schools, and two were from instructors on the college level. Thirteen instructors gave favorable ratings of the performance objectives as stated in the curriculum guide; two college instructors gave an unfavorable rating; and six of the respondents failed to rate the objectives. Eighteen (85.7%) instructors stated that they planned to use the guides and three (14.3%) of the respondents reported that they did not plan to change their instructional plans and procedures. Data in Table 5 give a summary of information received from the field review in the programmatic area of Air Conditioning-Refrigeration.

Table 5

Summary of Field Review Responses from Air Conditioning-Refrigeration Instructors

Institution Type	No Resp.	Ratings of Objectives* 5	4	3	2	NR	Potential Users Yes	No
Secondary	10	8				2	9	1
Post-Secondary V-T School	9	5				4	7	2
Colleges	2		2				2	
Totals	21	13	2			6	18	3

*5 - Satisfactorily stated performance objective and criterion-referenced measure
4 - Unsatisfactorily stated performance objective and criterion-referenced measure
3 - Included in present curriculum in stated scope and sequence
2 - Not included in present curriculum in stated scope and sequence
NR - Non-Rated

Comments received from the instructors of Air Conditioning-Refrigeration are as follows:

Teachers on the secondary level reported:

This material is good and I will be able to use some of it. We are faced with a problem of time since we have our students less than two hours per day.

Theory and fundamentals should show more emphasis on physics and chemistry to include refrigerant's characteristics, identifications, etc. Between Units B and C or perhaps between Units C and D a general safety objective and measurement of the entire Refrigeration and Air Conditioning industry should be included to supplement shop safety. Terminology or glossary of terms with new students on the secondary level seems to be a problem with slow learners. This guide is very good and I am sure each teacher will have a few additions or deletions.

We follow a curriculum that is very much the same as this one but we do not go into central air conditioning to the extent outlined in this guide.

I do not have equipment as outlined in the guide but I use what I have in a similar manner.

This curriculum has very good coverage of the fundamentals of Refrigeration and Air Conditioning for preparing an individual with all the basics, enabling him to perform the tasks necessary for acquiring employment. An instructor using this curriculum, and provided with proper reference books, training aids, and necessary tools and equipment will be able to turn out well qualified individuals.

After careful examination of the sequence of instruction, performance objectives and criterion-referenced measures, I find this product excellent. I will use this outline in my classes.

Will use as a supplement for students who plan to enter careers in Refrigeration and Air Conditioning.

Instructors from vocational-technical schools reported:

I feel that the curriculum is very good. It gives basic instruction in the fundamentals of Refrigeration and Air-Conditioning so that an individual leaving the vocational-technical school can perform the necessary tasks in order to get employment. Also this curriculum prepares an individual with the basic information to enable him to continue working toward an associate degree in this field.

In the terminal objective of Unit B, the phase "Understanding Compressor Functioning" is too open. To compute volts, amperes, ohms and watts by using Ohm's and Watt's laws may be included in the terminal objective of Unit C. We would like to suggest

criterion-referenced measures for the terminal objectives. The program is well constructed and we believe it will achieve its purpose.

The material is well written but it seems to be designed for high school or college use rather than for vocational-technical schools. The way it is written, all students must start together and stay together even if they do not achieve at the same rate. We, in the vocational-technical schools, use individualized instruction. I will use this guide to a limited degree.

Comments from one college professor was:

The minimum acceptable degree of competency is not stated in units A-F. There is no mention of minimum time involved in performing tasks in units A-F.

Responses from instructors of Drafting. Of the 21 responses received, nine were from teachers in secondary school programs, nine were from instructors in post-secondary vocational-technical schools, and three were from instructors on the associate degree collegiate level. All of the respondents gave favorable ratings to the performance objectives as stated. Eighteen (85.7%) of the instructors expressed a desire to use the curriculum guide while three (14.3%) reported that they would not use the material Data in Table 6, give a summary of information received from the field review in the area of Drafting. All of the instructors in this category gave favorable ratings of the performance objectives. Six of the instructors stated that some of the content was not included in their presently used curriculum in the stated scope and sequence.

Table 6

Summary of Field Review Responses from Drafting Instructors

Institution Type	No. Resp.	Ratings of Objectives* 5	4	3	2	NR	Potential Users Yes	No
Secondary	9	9			5		8	1
Post-Secondary V-T School	9	9		8			8	1
College	3	3		1	1		2	1
Totals	21	21		9	6		18	3

*5 - Satisfactorily stated performance objective and criterion-referenced measure
4 - Unsatisfactorily stated performance objective and criterion-referenced measure
3 - Included in present curriculum in stated scope and sequence
2 - Not included in present curriculum in stated scope and sequence
NR - Non-Rated

Comments received from the Drafting instructors are as follows:

Teachers on the secondary school level reported:

The Curriculum-Writing Team has certainly performed well and has developed a competency-based curriculum that is very worthy in all respects.

This curriculum guide could be used effectively in any continuous progress program.

The use of levels to eliminate costly repetition is an excellent idea. However, the implementation of the idea (which will require large scale planning and action) is yet to be seen. In order to eliminate the repetition, it will be necessary to standardize and supervise the drafting departments of schools in all levels considered.

The guide will be a great aid to all drafting instructors--not only will it add dimension to the existing courses, but if followed, it will coordinate all instruction so that students, when transferring from one school to another, will be on the same level, with the same background.

The guide contains too much Mathematics. The math should be learned before entering the course, and a brief review of the necessary functions for a particular unit should be given with the unit.

Equipment will vary from school to school. Due to lack of equipment in some schools, entire units must be omitted. However, when used as a guide rather than a step-by-step plan, each instructor can choose the units that his facility can handle.

The suggested time allotments on most units are too short for a high school level course in order to cover it adequately. The material in the advanced units gives the high school students an idea of what will be expected of them in institutions of higher education.

The team of writers has done a fine job, and with a few changes, the guide will be workable for all drafting teachers.

The program in general is excellent if it can be fitted into each individual school program.

Most of the material in the outline is outstanding. The levels program used in the outline is unnecessary. If a student has to go through these levels, he should be degreed upon completion.

I question the need for all the math. Otherwise, it is satisfactory.

Many draftsmen will never be required to use this level of math. Math should be taught in the Math department and not included in this guide.

Too much time is allocated to design aspects and not enough time to reading, drawing, and interpreting actual working plans. A new draftsman will not be entrusted to design work, nor does he have the background or experience to do design work. In the one to four year gap, between the time a student goes on the board and the time he does actual design work, he may have forgotten or lost confidence in his classroom design work.

Vocational Education should be a different approach from the Liberal Arts type curriculum offered in college. The curriculum should be direct career training with few fringe or non-related subjects. The student should be given the basis to allow him to immediately do useful professional work upon employment. He should also have a background which will allow him to learn and advance as rapidly as possible on the job, but it should not include subject matter which will not be applicable to his work for years. When these subjects are introduced, they tend to put the student out of perspective. He is trying to force applications which do not exist, simply because they are in his repertoire. He has a tendency to overlook the obvious while looking for glorified applications. Extension courses should be offered to allow information to be presented as job opportunities call for it.

I think you have done a tremendous job in the amount of time and the number of people involved. I believe a concerted effort to put all schools under a standardized objective guide is needed.

I think that too much is said about percentages and ratios in Level I. Level II--Too much emphasis on metal technology included. I use most of content except in math and related areas. Level III--Much of this level has to do with machine parts. We do not emphasize this very much so that the majority of this level is not included in my curriculum outline. Level IV--Good material and necessary. Level V--An overall view of many if not all fields of drafting provides the student the background to make a decision as to which field of specialization he wishes to enter. This level is probably the most important and, as shown, is very good. Levels VI, VII, and VIII--Here the instructor should be careful to install his own knowledge of industry demands inherent in his area. The development of these levels will determine length of course or possibly will be determined by time available. Overall comments--I think the material is excellent in most areas. Although it covers all of the basics that are in our course, it differs in sequence and emphasis. I feel that the upper levels will act mainly as a guide to allow the individual instructor to tailor his course to train for his particular area. This guide will be invaluable if adopted in some form similar to the one presented.

Since this is a Title I Vocational School, most of our students come to us without even slight knowledge of math, reading, or related graphic fields. Therefore, if in my drafting department, I can get the students to master the fundamentals of one-view, three-view, and isometrics, I feel that I have accomplished a great deal.

Besides, the most basic skills mentioned in your curriculum, I find the material too advanced for our students in the time alloted.

Vocational-Technical Schools' Drafting instructors commented:

I was very impressed with the material, and I am certain good results could be obtained when placed in the hands of trainees, especially those who have to be told what specific learning objectives are required of them. The material seems flexible enough to be of great benefit in developing and maintaining standards of instruction.

I am in full agreement with the level of technical related studies and math provided in the program. The degree of mathematical skill required of students completing Drafting at this school has contributed significantly to successful job placement.

The course appears to be a well thought-out and designed curriculum. The amount of math included in the curriculum is an area that might be questioned. It is believed that the students should have attained a majority of their competency in this subject in the secondary school system prior to enrollment in a post-secondary institution.

Due to the volume of materials and limited time assigned to the units, this outline seems to be secondary and associate-degree oriented where all subjects would be taught on a class basis. I do not believe adequate time is allowed for the "average" student to reach the required degree of competency. Much of the related subject matter deals with engineering design and should be taught in drafting from the standpoint of familiarization and terminology instead of complete mastery.

I find the material quite satisfactory. Since Baton Rouge is in the heart of the petro-chemical complex, our Industrial Piping course is our main vehicle for employment and, therefore, must be the most comprehensive. I plan to use many parts of the curriculum as is, and many other parts modified to fit the existing curriculum. Our math is offered as a separate technical math course (Fractions and Decimals through Trigonometry). Strength of materials is also covered in the Advanced Drafting courses. Sketching is essential. We now offer this as a separate course for all technical areas. It includes sketching, descriptive geometry, and models and model building. Familiarization with models and their uses in industry should be included in Advanced Drafting courses.

I would prefer the basic part of the course limited to basics and completed in 18 weeks; the bulk of the time should be devoted to specialization.

We do not agree with the levels concept. We believe the job skills that are listed as a Blueprint Machine Operator, Blueprint Trimmer and Messenger can be taught within a matter of hours and that a vocational-technical background in drafting is not necessary to obtain one of these types of jobs.

This school has utilized the six specialized areas of instruction outlined in the competency-based curriculum guide for drafting for several years and finds that it works well.

One comment was received from a college teacher:

We found the drafting curriculum to be sound and thorough. The topics covered are similar to those presented in our program although the sequence is somewhat different. Our set-up is not so regimented.

Responses from Electronics instructors. Of the 19 responses received, ten were from teachers in secondary school programs, nine were from instructors in the post-secondary vocational-technical schools, and none were received from instructors on the associate degree collegiate level. Fourteen (73.6%) of the respondents gave favorable ratings to the performance objectives as stated; four (21.0%) unfavorable reports were received; and, only one failed to rate the objectives. Thirteen (68.4%) of the instructors in this subject area expressed a desire to use the guide while six (31.6%) reported that they would not use the material. Data in Table 7, page 19, present a summary of information received from the field review in the area of Electronics.

Table 7

Summary of Field Review Responses from Electronics Instructors

Institution Type	No. Resp.	Ratings of Objectives* 5	4	3	2	NR	Potential Users Yes	No
Secondary	10	9	1				9	1
Post-Secondary V-T Schools	9	5	3			1	4	5
College	-	-	-			-	-	-
Totals	19	14	4			1	13	6

*5 - Satisfactorily stated performance objective and criterion-referenced measure
4 - Unsatisfactorily stated performance objective and criterion-referenced measure
3 - Included in present curriculum in stated scope and sequence
2 - Not included in present curriculum in stated scope and sequence
NR - Non-Rated

Teachers on the secondary school level reported:

The coverage provided in the guide is quite rapid for our school where we have a student two and one-half hours per day, 5 days per week for 36 weeks. The distribution of hours is not consistent with what I believe adequate time for lecture/demonstration, visual aids plus laboratory. There should be added a brief course about three to six hours on shop and laboratory safety with emphasis on hazards relative to electricity and electronic equipment together with elementary first aid for burns, cuts, and electrical shock.

Safety should be included in the first unit.

Material is very well presented. It is indeed an instructor's dream. This would be an ideal curriculum if the equipment and materials could be available to perform all of the performance objectives.

I believe you have a good guide to cover the spectrum of courses normally existing in our State and I would like to receive a revised final copy to use as it fits into and/or would modify my course.

The curriculum writers should have allotted time for lab in measuring voltage current and resistance. Should add safety rules before using lab. Power supplies and amplifiers should precede tape players and radios.

The coverage of AC Theory is somewhat skimpy. The oscilloscope should be introduced with basic measuring devices then taken up in more detail at a later time (after vacuum tubes, semi-conductors, etc.) Statements of performance objectives and criterion-referenced measures are quite good (perhaps quite optimistic).

Questioned sequence of learning activities.

New textbooks and performance sheets would have to be developed as well as the acquisition of new equipment.

This guide will be useful to me as a reference in expanding our particular program. The material included in the secondary program is well arranged and the material adequate. Suggested times for completion, however, are unrealistic for an in-depth coverage of the subject matter.

This guide could be used as a supplement for special students interested in electronics.

Electronics instructors from the post-secondary vocational-technical schools made the following comments:

There is a lack of coordination between identical programs throughout the State's vocational-technical system.

The material in the new curriculum is very well written, and all materials presented make for interesting as well as an informative program. Outside of the few mistakes previously noted by others, I find nothing in the curriculum on which to comment. However, after a thorough review of the new Performance-Based Curriculum, I would like to add the following recommendations:

As written for the High School students there are a great many subjects to be covered in the time allotted. How well this material is assimilated will depend not only upon the interest shown by each individual, but also how much time is spent in class. Some of the subjects covered can very well be finished in the time shown, while others can only be skimmed over lightly. If the student pursues the Post-Secondary Curriculum, we have to assume he or she has had a solid foundation in the Basics as well as experience in diagnosis and repairs to related electronic equipment.

If we get this type of student, then the Post-Secondary Curriculum can be followed with very little difficulty, but what can be done for the students coming into the Trade School without this solid foundation in the Basics? Students enrolling at different times makes it difficult to maintain all on the same studies. The more advanced students present another problem--there may be no more than two students studying the same lesson at one time. (At present we have two students studying the last phase of lessons, but not on the same lesson, three beginners--all on different lessons because of age and different educational background. The others are all on different lessons in between the upper and lower levels.)

There should be another Curriculum presented for this type of student--one that would teach Basic Electricity, Basic Electronics, and Math. The second year he could have the choice to specialize in the area in which he is interested--such as Radio/Television repairs or Broadcasting, Two-way Communications, computer maintenance, Electro-Mechanical equipment and instrumentation. The field of electronics being so broad, there is a need for specialized training in a particular field.

A possible solution could be an extension of this Curriculum for a duration of three years.

I feel that the performance objectives for each experience are basically sound and needed, however:

1. Sequence of material presentation needs refining (i.e., student required to use meters for measurement prior to developing basic meter reading skills or orientation on their proper application.)
2. Students learning exercises for reinforcement of theoretical principles should be simplified. (i.e., In the present world of work Radio-TV Technicians find little or no application for chassis punch, reamers, etc., most chassis now use PCB's or modular concept.)
3. Performance objectives in many cases are too broad. Example: Task 11 performance objectives should be integrated into Tasks 12 and 13. In other words the student should learn how to sum capacitors and inductors while learning the laws and properties of capacitance and inductance. Transformers are presented before alternating current principles when transformers must utilize AC to operate.
4. Criterion-referenced measures should in my opinion be more specific.
5. Vocational school instructors are presently reviewing with the goal of up-dating the presently available course with the intention of revision of performance objectives presented for each unit of work.

This guide seems to be college-oriented and not suitable for vocational-technical school implementation.

Not possible to make a Radio or TV technician in the period of time allocated.

Guide should be rearranged in scope—learning symbols and color codes should be before schematic reading.

Responses from instructors in the field of Nursing. Of the 21 responses received, six were from teachers in the secondary schools, seven were from instructors in the post-secondary vocational-technical schools, and eight were from instructors of collegiate associate degree programs. Eight (38.0%) of the respondents gave favorable ratings to the performance objectives; nine (43%) of them gave unfavorable ratings; and, four (19.7%) of them did not rate the objectives. Twelve (57.0%) of the instructors expressed a desire to use the guide, while nine (43%) reported that they would not use the material. Data in Table 8 present a summary of information received from the field review in the area of Nursing programs.

Table 8

Summary of Field Review Responses from Instructors of Nursing

Institution Type	No. Resp.	Ratings of Objectives* 5	4	3	2	NR	Potential Users Yes	No
Secondary	6	2	1			3	5	1
Post-Secondary V-T School	7	5	2				6	1
College	8	1	6			1	1	7
Totals	21	8	9			4	12	9

*5 - Satisfactorily stated performance objective and criterion-referenced measure
4 - Unsatisfactorily stated performance objective and criterion-referenced measure
3 - Included in present curriculum in stated scope and sequence
2 - Not included in present curriculum in stated scope and sequence
NR - Non-Rated

Comments, relative to the curriculum guides, received from the instructors of Nursing programs are as follows:

Teachers on the secondary school level reported:

The content appears to be a complete guide and well planned. It will serve as a guideline with options to add or delete according to individual viewpoints. We recommend that examples of instructional objectives in behavioral terminology be included to illustrate to the instructor how the stated performance objectives could be accomplished.

I am most grateful for the opportunity to review this guide and wish to express my congratulations to the writing team members for their excellent work. The material will be most useful for working with my students. Comments and suggested changes:

1. I need clarification on charting and the use of charts.
2. Should the application of hot and cold compresses, packs, and soaks be excluded from the Nurse Aide curriculum?
3. Should aseptic technique methods be taught to Nurse Aide?
4. Should Nurse Aide program include preparing for and assisting with examinations?
5. Should Nurse Aide programs include a course in First Aid?

Only a small portion of this guide will be useful to me. I recommend at least 80% accuracy for passing grade. I prefer not to interchange the words "patient" and "client" as presented in the book. Certain portions need more flexibility.

The enclosed review chart is inappropriate for the comments I feel are necessary for my evaluation. Please keep in mind that I am involved in the Secondary School System, instructing 11th and 12th grade students; therefore, my views are somewhat biased in the area of the Nurse's Aide curriculum.

Unit 3, (The Health Care Planning) as I view it would include the the professional duty of an R.N. and possibly the L.P.N., while an aide would seldom if ever be in the position to perform in this area. I believe this would be a more advanced nursing skill not expected of the Nurse's Aide.

Unit 28 (Care of the Patient with Gastrointestinal Tubes), performance objectives 2 and 3 seem to be duties of the L.P.N. or R.N.

Unit 40 (Aseptic Techniques) should be included in the curriculum for the Nurse Aide, as well as for the L.P.N. as they are often involved in isolation cases and much of the material or equipment they use is sterilized or is considered aseptically clean. It is essential that they too are instructed in this area.

Lastly, Unit 45 (Application of Hot and Cold Compresses, Packs, and Soaks) should be included in the Aide program as he/she will be required to maintain this treatment.

The L.P.N. Curriculum, after reviewing it, leaves me with several questions, for instance, Unit 41's (Preparation and administration of Medication) performance objective #3 concerning intravenous medications, gives me reason to ask, does the State of Louisiana allow L.P.N. to give I.V. medications? This, to the best of my knowledge, should be restricted to R.N. responsibility. Secondly, Unit 43, performance objective #3, makes mention of the use of Chemistry and Physics. Will these subjects be a requirement for admission into an L.P.N. program or will these courses be included in the L.P.N. curriculum?

I also wish to suggest that Semester III be included in the L.P.N. curriculum. Since L.P.N.'s work in the obstetrics, pediatric, and psychiatric departments, I feel that it is vital to educate them in these areas.

I personally feel that the competency-based curriculum would make an excellent supplemental guide but find that the performance objectives and criterion-referenced material rather difficult to achieve on a secondary level. Some of our students lack the basic educational and more importantly the maturity level necessary to achieve these goals. Once a student is placed in our curriculum, even if he/she is poorly prepared for the many aspects of the Nurse's Aide program, they must continue until the semester ends. Therefore, we are handicapped with some low achievers and students attempting to find their way into a health associated career.

The articulated program in Nursing Occupations is a splendid and much needed goal. It would be an incentive for the capable and aggressive student to meet their goal.

Post-secondary Vocational-Technical instructors made the following comments:

Eighty percent accuracy is recommended, not 75%. We would like to see competency-based curriculum for articulated programs in Nursing occupations.

I think all the work is excellent, but I did question the 75% accuracy level. I feel the competency level should be higher. The material is put together well and format is easy to use.

According to Nurse Practice Act, the L.P.N. is not allowed to insert the N/G tubes. Therefore, this unit should be included in Semesters III, IV, or V and not before.

The unit, "Assisting with Somatic Psychiatric Therapies," should be included in Psychiatric Nursing, Term III.

The unit, "Techniques of Fetal and Maternal Monitoring," should be included in Maternal and Child Health, Semester III.

We are using performance-based curriculum and I am very anxious to see Louisiana move into career ladder option. I sincerely hope this is one step in that direction.

Instructors of associate-degree programs in Nursing submitted the following comments:

I am a staunch supporter of the ladder concept with particular interest in its implementation in the field of nursing education. We initiated the ladder concept five years ago, offering the Licensed Practical Nurse advanced placement in the nursing major in our Associate Degree nursing program of study.

I find that much more detailed planning, evaluation, and delineation of the two roles has to be developed for this type of program to be practical. By the two roles, I am referring to the nurse assistant's (L.P.N.) role and the A.D. nurse practitioner's role of providing secondary nursing care. In particular, we have found that the L.P.N. student must not only be oriented to the new role, but allowed adequate time to develop the new role. It is not merely the learning of a few additional procedures unique to nursing added to their background. Definite roles and terminal behavioral expectations for each level must be spelled out.

We feel 75% accuracy level would produce nurses who are not safe to practice nursing. The problem to consider is one of students dealing adequately with client behavior 75% or even 80% of the time, but making lethal or harmful errors in judgment the remaining 20% or 25% of the time. Referring again to the 75% measure of accuracy, we felt measurement of the information shared in group discussions quite difficult or next to impossible for the instructor to determine accurately or completely.

Would the L.P.N. lack maternal-child health background? I find I must react to the obvious methods of determining if a student meets the objectives "to the satisfaction of the instructor." This does not provide criteria with which to comply, except the whims of the instructor. An objective tool rather than one so subjective would strengthen the units immeasurably.

A program should be developed that would be more concept-oriented rather than procedure-oriented to provide professionalism to the program.

Repeatedly, we have identified the following weak areas in the L.P.N. who has achieved advanced placement in our program. They are: (1) concept formulation, (2) scientific principle, (3) communication, (4) problem solving, (5) leadership, and, (6) psychiatric nursing principles.

The following response was received from a hospital administrator:

We have reviewed your curriculum with instructors from the A.D. and L.P.N. program who use our facilities. We are satisfied with

the 75% accuracy. We do feel that a simple statement after each exit point in the curriculum would correlate the Table of Contents and the overview of the curriculum.

Our general feeling is that the L.P.N. should not exit at Semester II before "Maternal-Child Health" and "Psychiatric Nursing." These are areas in which L.P.N.'s can and do function adequately. We are still using the Insulin Shock Therapy in this city for psychiatric patients, and would like to see it left in the curriculum as outlined in Unit 52. Advanced Nursing of Adults and Children is included in our A.D. curriculum here. It should take the two semesters and we are satisfied with the placement in the curriculum.

We appreciate being allowed to preview the material and we feel the revisions are long overdue.

Responses from instructors in the field of Office Occupations. Of the 71 responses received, 40 were from teachers in the secondary schools, 26 were from post-secondary vocational-technical school instructors, and five were from college teachers. Sixty-three (89.0%) of the respondents gave favorable ratings to the performance objectives, six of them gave unfavorable ratings, and two of the respondents failed to rate the objectives. Sixty-one (86.0%) of the respondents expressed a desire to use the guide while ten (14.0%) of them reported that they would not use the material. Data in Table 9 present a summary of information received from the field review in the area of Office Occupations.

Table 9
Summary of Field Review Responses from Instructors of Office Occupations

Institution Type	No. Resp.	Ratings of Objectives* 5	4	3	2	NR	Potential Users Yes	No
Secondary	40	39	1		2		37	3
Post-Secondary V-T School	26	23	1		2	2	24	2
College	5	1	4					5
Totals	71	63	6		4	2	61	10

*5 - Satisfactorily stated performance objective and criterion-referenced measure
4 - Unsatisfactorily stated performance objective and criterion-referenced measure
3 - Included in present curriculum in stated scope and sequence
2 - Not included in present curriculum in stated scope and sequence
NR - Non-Rated

Comments received from the Office Occupations teachers follows:

Teachers on the secondary level reported:

The curriculum guide is very well prepared. It is broad in scope and offers an instructor a lot of information to use in whole or in part. Those who worked to prepare this guide did an outstanding job.

I would like to see more learning packets developed.

We do not include letter writing in our Accounts Payable unit. We do not include mailing monthly statements to customers in our Bookkeeper I course.

This curriculum is well written. The performance objectives and criterion-referenced measures are more than satisfactorily stated in each job title. One of the many outstanding features of the curriculum is the Review Test for Arithmetic Proficiency included in the "Instructor's Copy of the Learning Packet for Sales Clerk Job."

The Competency-Based Curriculum for Articulated Programs in Office Occupations is in keeping with the present writing of performance objectives. It will serve as a helpful guide to all who use performance objectives now or in the future. I would like to see more jobs dealing with the secretary (Medical, etc.).

You have done an excellent job in producing what teachers are having a hard time doing--writing good performance objectives for their particular disciplines.

This is an excellent guide for vocational and office education teachers and students. I believe that the guide will assist any instructor in preparing and using materials in a way that will enable students to develop skills that are more appropriate for employment. We use performance-based materials on a small scale. The guide will assist us in extending our efforts and in improving our accomplishments.

The performance-based curriculum has been reviewed and we feel that it will be a great help to our department and to our students.

This is an excellent book, one that could really be expanded. I have found some duplication of my performance objectives, giving me great assurance.

This curriculum will serve as a guide or supplement to material we presently use. Our program is not in exactly the same sequence. However, we find that we are presently working in close accord with the objectives as stated by the committee.

The performance objectives are satisfactorily developed and the criterion-referenced measures are adequate. The material, excluding keypunch operator, covered under the varied job titles is present in our curriculum but it is not in the stated scope and sequence. This curriculum will definitely be an aid in the further development of our curriculum. Thank you for providing office education with a competency-based curriculum.

Machines required on job performance tests are not available to my students.

This is a very good guide that would prove useful; however, given the shortage of paper as well as preparation time, perhaps some suggestion might be given for all jobs as to where prepared items might be purchased. Some idea might be given as to class type rotations, etc. that could be used while attempting to carry out the training in a class of thirty students.

The committee has submitted an excellent proposed curriculum. They deserve recognition.

This is an excellent guide for those who prefer stated performance objectives.

The Field Review Copy of Competency-Based Curriculum for Articulated Programs in Office Occupations certainly is a step in the right direction. Each Job Title was followed by Performance Objectives and Criterion-Referenced Measures indicating the minimum expectations of our students for job entry. This should be a help to Vocational Business and Office Education teachers, Vocational Guidance Counselors, and Administrators in working with students, (both those who expect to graduate and the potential drop-out who may leave the training program before completing it).

I realize that one Job Title had to be selected to develop Student Learning Packets and Teacher Learning Packets, but I do wish it had been one more traditionally recognized as an office occupation rather than that of the Sales Clerk which is associated with Distributive Occupations. For the sake of illustration, however, it does an excellent job of presenting the possibilities available with Performance Objectives and the Competency-Based Curriculum.

Some real consideration should be given to the suggestion made by the State supervisor to include in the Job Titles the various areas of the secretarial field such as the many kinds of secretaries.

I believe this material will be helpful to me and my students. I especially look forward to receiving a copy of the completed project.

A test on verbal skills should be included. Performance tests by subject matter is desirable.

The Competency-Based Curriculum for Articulated Programs in Office Occupations is one that can be useful in expanding the curriculum to include certain jobs that are not normally fully covered in most textbooks. We think your performance objectives and criterion-referenced measures are adequate to meet the basic entrance requirements of most jobs. Thank you for this curriculum and a job well done.

After reviewing the Competency-Based Curriculum for Articulated Programs in Office Occupations, I find that the terminal and performance objectives are well stated and I am in agreement with most of the job analyses.

In an effort to further assist office occupation teachers, examples of instructional objectives--which would ultimately lead to the accomplishment of the performance objectives--should be provided and stated in measurable behavior terminology.

Effective implementation would possibly prove problematical since a guide of this scope and dimension would naturally require that consideration be given to the diverse nature of the teacher and students--as well as the socio-economic backgrounds of students. Additionally, the unique combinations of characteristics prevalent in each school district should be reviewed.

Further, should a state curriculum guide be adopted, an advisory committee should be set up to provide for long-range planning, in-service training and other supportive services necessary for its effective utilization. In addition, efforts should also be undertaken to determine administrative support.

In a review of the available literature concerning implementation of state curriculum guides, many problems have been sighted. I recommend Dr. Thomas R. Warner's dissertation "An Investigation of the Utilization of Curriculum Guides in a State-Wide Career Education Program in Louisiana."

The book is good and shows that those who worked on it did an excellent job.

This competency-based curriculum guide will be greatly appreciated by all business education teachers.

The material is excellent, but under my present program of teaching subject matter I do not have materials to determine the production rates as outlined in this guide.

This is an excellent program for Office Occupational training.

I feel that this guide is great. It will help me to further develop performance objectives and criterion-referenced measures for a curriculum for COE that I have been working on. Thanks for a job well done.

The material presented in the Competency-Based Curriculum in Office Occupations is excellent and the teachers in this department are anxious to use the guide.

The only suggestions we feel we could make were in the area of the keypunch and this probably would be a local problem. The time allowed for the timed problems was much longer than we have ever been able to allow. We rent two keypunch machines and teach the course one semester a year, therefore, we cannot time students for 30 or 35 minutes at a time. I may not have marked the review sheet correctly but what I intended to show was that these timings are not in our present curriculum in the stated scope.

Thank you for including us in the field review. This allowed us to get the guide much sooner and we are already using parts of it.

I teach adding machines, calculators, and machine transcription skills in a vocational-technical type school. Therefore, some of the material in your overall program is applicable and helpful to me. Your guide is very good but goes beyond what I teach. You have done a good job.

Our business staff has reviewed the competency-based curriculum for articulated programs in Office Occupations and find it very meaningful and useful.

The Competency-Based Curriculum for Articulated Programs in Office Occupations is very well developed and very thorough.

I thought the performance objectives were excellent. I feel that some of the students I teach would have trouble attaining the objectives. For example: Page 44, 1.02--I feel that my students could not transcribe at a minimum rate of 60 wpm.

Thank you for producing the Curriculum. I am considering trying many of the performance objectives.

Post-secondary vocational-technical school instructors made the following comments:

Questioned time factors and skill requirements. Material should be considered in future curriculum development for the Vocational-Technical School System.

A guidebook for our curricula in Office Occupation's programs is certainly needed. This guide has been organized and submitted in a very efficient manner.

These curricula are very well planned, but are too specialized to be set up properly under the present vocational system.

During the training period of a student I agree completely with the idea that we must make allowances for error and time limit. If these Performance Objectives and Criterion-Referenced Measures are written for students they are excellent, but if they are written for the employee, I think the time limit should be lifted and the performance should be not less than 100% accurate since a minor error in business could represent much money.

Objectives for slow learners in all programs should be included in this guide.

Some of the accuracy levels established as acceptable are questioned. It seems that a higher level of performance should be expected.

How will this curriculum fit into our program as it is now? Would students upon entering choose a job classification and work toward preparing for that specific job rather than a more general classification that prepares them for more jobs so they may choose whatever job may be open at the time of their graduation? What about the basics that are not included in this curriculum.

I feel that this program is quite thorough and I have no recommended changes to make. The program is a good one that will help us to accomplish one goal--to provide students with marketable skills.

This can be helpful in our Office Practice course.

This material seems like excellent individualized work and/or supplementary work for our students. It gives a very realistic approach to what the student may expect in the job market.

This material would be best used, perhaps, as a basis to see if a student can perform these tasks and is ready to graduate. They are good in that students must learn to follow directions.

The following comments show less interest exhibited by the instructors on the college level:

In general we feel that the bulk of the competency-based curriculum for articulated programs in Office Occupations is good. We do have reservation that the material may be somewhat elementary for use on the university level. Also, we do not believe there is adequate emphasis on, or provision for, development of the basic written communication skills such as spelling, grammar, and punctuation.

Such a program would not be compatible with our locked-step instruction at the collegiate level. Much of the material is very appropriate, with realistic standards; however, some of the standards seem to be too optimistic and also some of the terms regarding evaluation of job performance are highly subjective.

Where does the secretary for the small business fit into your curriculum? What about the secretary-bookkeeper for the construction office?

Data in Table 10, page 33, present a composite picture of the interest expressed by the field reviewers in the five programmatic areas. More responses were received from secondary school teachers (49.0%), followed by vocational-technical school instructors (39.0%), with only twelve percent of the returns completed by instructors on the associate degree level.

Eighty percent of the respondents expressed a desire to use the competency-based materials.

Table 10

Summary

Field Review Responses

Area	Institution Type*			Ratings of Performance Objectives and Criterion-Referenced Measures**					Potential Users	
	1	2	3	5	4	3	2	Non-Rated	Yes	No
A/C-Refrigeration	10	9	2	13	2			6	18	3
Drafting	9	9	3	21		9	6		18	3
Electronics	10	9	0	14	4			1	13	6
Nursing	6	7	8	8	9			4	12	9
Office Occupations	40	26	5	63	6			2	61	10
Total Responses	75	60	18	119	21	9	6	13	122	31
Percentages	49.0	39.0	12.0	77.7	13.0				80.0	20.0

*Institutional Type:
1 - Secondary
2 - Vocational-Technical
3 - College

**Performance Objective Ratings
5 - Satisfactorily stated Performance Objectives and Criterion-Referenced Measures
4 - Unsatisfactorily stated Performance Objectives and Criterion-Referenced Measures
3 - Included in Present Curriculum in Stated Scope and Sequence
2 - Not Included in Present Curriculum in Stated Scope and Sequence
Non-Rated - No Rating Indicated on Returned Forms

IDENTIFICATION OF PROBLEM AREAS FOR THE SPECIAL NEEDS STUDENTS

Legislative Act 208, Section 3: 1997, mandated an open-door policy for all post-secondary vocational-technical schools of Louisiana as follows:

> The vocational-technical schools shall be operated under an open door policy and shall serve persons on an equal priority basis, including but not limited to, adults, veterans, high school students, persons who have dropped out of high school and minority ethnic groups. Persons meeting board requirements with respect to age shall be free to enroll in any school in the State and there shall not be any geographic barriers to enrollment.

To reasonably assure an individual a chance for success in a vocational-technical program of training, it is mandatory that the individual be able to function in the academic subjects of reading, mathematics and language arts at the standard grade level required to understand the related subject matter of the various programs offered at the post-secondary vocational-technical schools.

Information was collected by visiting the thirty-three post-secondary vocational-technical schools and interviewing the Directors, Guidance Counselors, Special Needs Instructors, and Instructors in each of the five areas studied. A questionnaire (Appendix C) was completed for each school.

An analysis of the data collected, relative to the number of students enrolled who are tested and score below functioning levels in reading, arithmetic, and language skills, shows there is a definite need for the development of materials for these students. The average percentage of students tested for entry in the post-secondary vocational-technical schools who score below functional levels is 44.8 percent as indicated in Table 11; page 35. There are 33 Special Needs instructors employed in these post-secondary schools. Five (15.1%) of the schools are without Special Needs instructors; seven (21.0%) schools have two instructors; and, twenty (60.0%) schools have one instructor.

An average of 7.2% physically handicapped students are enrolled in the post-secondary vocational-technical schools. This small percentage is due to the lack of facilities and equipment in the schools. This problem will be alleviated when the present expansion program is completed.

Table 11

Percentage of Students with Special Needs Tested for Entry in the Post-Secondary Vocational-Technical Schools

	Percentage Special Needs	Students Handicapped
Alexandria Trade School	50	-
Avoyelles Vocational-Technical Institute	30	5
Baton Rouge Vocational-Technical Institute	33	3
Capital Area Vocational School	75	-
Central Area Trade School	90	25
Concordia Parish Trade School	25	5
Delta Area Vocational School	40	10
Evangeline Area Tri-Parish Vocational-Technical School	75	2
Florida Parishes Vocational School	50	5
Gulf Area Vocational-Technical School	10	-
Hammond Area Vocational School	25	-
Huey P. Long Memorial Vocational School	70	-
Jefferson Davis Vocational-Technical School	50	1
Jefferson Parish Vocational School	60	1
Memorial Area Vocational School	50	-
Natchitoches Trade School	40	5
North Central Area Vocational-Technical School	30	-
Northeast Louisiana Vocational School	50	10
Northwest Louisiana Vocational-Technical School	30	-
Orleans Area Vocational-Technical School	100	1
Ouachita Valley Technical Institute	34	
Sabine Valley Vocational-Technical School		
St. Landry Vocational-Technical School	33	5
Shreveport-Bossier Vocational-Technical Center	0	-
Slidell Vocational-Technical School	20	30
South Louisiana Trade School	25	20
Southwest Louisiana Vocational-Technical School	25	2
Sowela Technical Institute	33	2
Sullivan Vocational-Technical Institute	45	10
Teche Area Vocational-Technical School	55	5
Westside Vocational-Technical School	75	1
Young Memorial Vocational-Technical School	16	2
Average Percentage	44.8	7.2

When asked to rank the areas of special needs, the interviewees reported arithmetic first, reading second, and language third as indicated in Table 12. Reports from fifteen schools showed arithmetic first; twelve schools reported students have greater weakness in reading; and, one school ranked language ability as the greatest weakness of potential students.

Table 12

Areas of Special Needs
(Rank Order)

Area	Rank Order		
	First	Second	Third
Arithmetic	15	11	1
Reading	12	14	1
Language	1	2	24

The average dropout rate was reported as 38.2%. This figure does not represent a true picture since more than one-half of these students exit with marketable skills. They are recorded as non-completions or dropouts if they fail to remain in a program until certificated. Data in Table 13, page 37, present information concerning dropout rate for the five areas of study: Air Conditioning-Refrigeration, Drafting, Electronics, Nursing and Office Occupations.

Table 13

Dropout Percentage by Programs

School	Overall	A/C-Refrigeration	Drafting	Electronics	Nursing	Office Occupations
Alexandria Trade School	40		10		50	25
Avoyelles Vocational-Technical Institute	25					25
Baton Rouge Vocational-Technical Institute	35	15	6	27	33	17
Capital Area Vocational School	30				30	27
Central Area Trade School	25			25		25
Concordia Parish Trade School	75					
Delta Area Vocational School	2		10	30		
Florida Parishes Vocational School	60			25		5
Gulf Area Vocational-Technical School	55	55	60	65	10	45
Huey P. Long Memorial Vocational School	30					25
Jefferson Davis Vocational-Technical School	90		96		15	75
Jefferson Parish Vocational School	50	10	70	1	53	70
Natchitoches Trade School	30	22	33		25	35
Northeast Louisiana Vocational School	10		10	5	5	17
Northwest Louisiana Vocational-Technical School						17
Ouachita Valley Technical Institute	5		5	5	5	25
Sabine Valley Vocational-Technical School	15	15	15	15	15	15
St. Landry Vocational-Technical School	50	60	25	33	5	50
Slidell Vocational-Technical School	8	5		12	5	20
South Louisiana Trade School	80		60	60	3	75
Southwest Louisiana Vocational-Technical School	75	60	15	50	10	75
Sowela Technical Institute	50	10	5	10	50	33
Sullivan Vocational-Technical Institute	10	10	10	10	56	15
Teche Area Vocational-Technical School	50		1	20	25	25
Westside Vocational-Technical School	35			25	5	5
Young Memorial Vocational-Technical School	20		5	25	2	25
Average	38	26	26	25	21	32

Analysis of the data concerning testing materials used to screen potential students revealed no standardization procedure being followed throughout the thirty-three post-secondary vocational-technical schools. Data from three of the schools show no screening or testing procedure is used.

The following are screening tests listed in the order of frequency used in the vocational-technical schools:

California Achievement Test, Advanced Level, McGraw-Hill Publishing Company, Monterey, California.

The Dailey Vocational Tests, Houghton-Mifflin Company, Boston, Massachusetts.

Otis-Lennon Mental Abilities Test, Harcourt, Brace & World, Inc., New York, New York.

Army General Classification Test, Science Research Associates, Chicago, Illinois.

Minnesota Clerical Test, The Psychological Corporation, New York, New York.

California Achievement Test, Intermediate Level, McGraw-Hill Publishing Company, Monterey, California.

Kuder Preference Record, Science Research Associates, Chicago, Illinois.

California Test of Basic Skills, McGraw-Hill Publishing Company, Monterey, California.

Bennett Mechanical Comprehension Test, The Psychological Corporation, New York, New York.

Non-verbal Reasoning Test, Science Research Associates, Chicago, Illinois.

Listings of instructional materials used in the Special Needs programs were multiple and varied. The most frequently-used materials are listed in Appendix .

When asked how the competency-based materials developed in the five programmatic areas could be changed to meet the needs of students in their classes, the Special Needs instructors made the following recommendations:

(1) add glossary of terms for slow learners
(2) add performance objectives for slow learners
(3) provide for the development of the basic written communication skills in the performance objectives for each unit, job title, or level.

(4) develop a competency-based curriculum for the Special Needs program.
(5) add a supplement to each curriculum developed for teaching the basics in math, reading, and language.
(6) add objectives for remedial teaching in reading and math skills in each program area developed.
(7) change the time and accuracy levels for the Special Needs students.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

From the review of related literature, assessment of the state-of-the-art locally and nationally, collection of curricula data on all Louisiana secondary schools, vocational-technical schools, and colleges, and responses from field reviews of the competency-based curricula developed, the following conclusions may be made:

(1) Data bases revealed fewer reports which specifically address secondary and post-secondary articulation of occupational education programs.

(2) All Articulation Advisory Committee members agreed that the implementation of articulation agreements would improve the coordination of vocational-technical education programs, but due to the State's organizational structure and different funding sources, it was impossible to secure signed agreements for student transfer credit, and sharing of equipment, facilities, and faculty.

(3) Louisiana vocational educators are using competency-based instructional materials, to a limited degree, in Office Occupations, Nursing, and Air Conditioning-Refrigeration.

(4) Eighty percent of the educators responding to the field review of the competency-based curricula reported that they would use the materials to upgrade vocational-technical education in Louisiana.

(5) Evidence of one workable, planned articulated program in vocational-technical education was found to be in existence in Louisiana.

(6) A definite need for the development of competency-based curricula for the Special Needs students was established. Data analysis showed that 44.8 percent of the students tested for admittance to the post-secondary vocational schools were below functioning level in math, reading, and language skills.

(7) The project staff was pleased to achieve all of the objectives of this project with the exception of securing signed articulation agreements between the administrators of the secondary schools, post-secondary vocational-technical schools, and colleges offering associate degree programs. The high interest expressed by everyone was not accompanied by definite plans for change.

Recommendations:

To further improve Louisiana's expanding vocational-technical school system enabling students' progress through an occupational program at a rate commensurate with their abilities and skills, the following recommendations are made:

(1) The Bureau of Vocational Education, State Department of Education take the initiative for the development of competency-based curricula in all of the other programmatic areas of vocational-technical education.

(2) Improve the lines of communication among schools on the three institutional levels offering vocational-technical education. Area workshops, involving guidance counselors from all the schools, could be most effective in this communication process.

(3) Increased involvement of people from business and industry in the development of competency-based materials. Proof of their interest and concern is documented in this report.

(4) Develop Competency-Based curricula for the Special Needs students in the areas of reading, math, and language skills to supplement the existing curricula.

BIBLIOGRAPHY

Anderson, Mary S., Joseph F. Clark, and Anna M. Gorman, ed. Seventh Annual National Vocational and Technical Teacher Education Seminar Proceedings. Dallas, Texas: The Ohio State University, 1974.

Baker, John H. and Lawrence F. H. Zane, ed. Collaborative Roles and Functions of Occupational Education Programs. Honolulu, Hawaii: University of Hawaii, 1974.

Carter, Richard H. A Curriculum Guide for Plumbing, Heating and Air Conditioning. Maine: Maine State Department of Education, 1972.

Colsden, Lyle. Minimum Levels of Technical Competency Standards of Business and Office Education Programs in Nebraska. Final Report. Nebraska: Nebraska State Department of Education, 1974.

Day, Gerald F. and Dennis R. Herschbach. Resource Guide for Performance-Based Carpentry Instruction. Maryland: University of Maryland, 1974.

———Education for Automotive Services Careers--A Guide for Course of Study for Automotive Services and Related Occupations (Entry Level). Nashville, Tennessee: Tennessee Department of Education, 1972.

———Education for Automotive Services Careers--An Articulated Curriculum Guide for Secondary Schools and Area Vocational-Technical Schools. Nashville, Tennessee: Tennessee Department of Education, 1972.

Elam, Stanley. Performance-Based Teacher Education - What is the State of the Art? Washington, D. C.: American Association of Colleges for Teacher Education, 1971.

Houston, Robert W. Performance Education - Strategies and Resources for Developing a Competency-Based Teacher Education Program. New York: New York State Education Department, 1972.

Houston, Robert W., Norman R. Dodl, and Wilford A. Weber. Competency-Based Teacher Education Program Design: A Simulation. Westfield, Texas: Competency-Based Instructional Systems, 1973.

Jackson, Frank. The Identification and Validation of Competencies Requisite to Effective Functioning of Secondary Counselors, Vocational Counselors, Elementary Counselors, Special Education Counselors, and other Guidance Personnel. Texas: Texas Education Agency, 1974.

Kyros, William. "TERMOB: Performance Objective with a Bigger Bite." American Vocational Journal. Washington, D.C.: American Vocational Association, Inc., May, 1975.

McKinnerney, Beryl R., Roy Thomas, and Herman R. Todd. Student Articulation Between Secondary and Post-Secondary Education. A Suggested Guide. College Station, Texas: Texas A & M University, June, 1974.

Magar, Robert F. Preparing Instructional Objectives. Palo Alto, California: Fearon Publishers, Inc., 1962.

———Manual of Comis Operating Procedures and Computer Software. Ames, Iowa: Iowa State University, 1974.

Matthews, Howard A. Time Free Modular Competency-Based Curriculum. Basic Electronics, Initial Report. Montgomery, Alabama: Link Educational Laboratories, 1974.

Matthews, Howard A. Time Free Modular Competency-Based Curriculum. Industrial Electricity. Final Report. Montgomery, Alabama: Link Educational Laboratories, 1974.

Matthews, Howard A. Time Free Modular Competency-Based Curriculum. Industrial Electricity. Instructional Resources. Montgomery, Alabama: Link Educational Laboratories, 1974.

Matthews, Howard A. Time Free Modular Competency-Base Curriculum. Industrial Electricity. Intermediate Report. Montgomery, Alabama: Link Educational Laboratories, 1974.

Morgan, Samuel D. and Douglas Patterson. "Articulation--Agriculture and Career Education. Their Various Roles." The Agricultural Education Magazine. Virginia: Virginia Polytechnic Institute and State University, September, 1973.

———Outline of T & I Courses Common to Calcasieu Parish Schools and Sowela Technical Institute. Louisiana: Sowela Technical Institute, 1972.

Pope, Billy N. Search for Common and Unique Competencies of All Administrators and Supervisors Needed by Vocational Administrators and Supervisors. Richardson, Texas: Texas Education Agency, June, 1974.

Regents of the University of the State of New York. The Articulation of Secondary and Postsecondary Education. A Statement of Policy and Proposed Action. Albany, New York: The State Education Departm nt, August, 1974.

———"Special Needs Education. A Case of Name Calling?" American Vocational Journal. Washington, D.C.: American Vocational Association, Inc., February, 1975.

Swanson, Gordon I. The Preparation of Teachers for Vocational Education. Minneapolis, Minnesota: University of Minnesota, 1974.

Wall, James E. Impact of Vocational Education and Manpower Training on Target Populations:. Ethnic Groups, the Disadvantaged, Handicapped, Unemployed, and Unemployable Adults. Supplementary Report. Mississippi: Mississippi State University, 1974.

Microfiche:

———Articulation Study Report. 1973. Tallahasse, Florida: Florida State Department of Education. 1973. 85 . ED 087 503.

———Business Education Curriculum Guides for the 70's. Trenton, New Jersey: New Jersey State Department of Education, Division of Vocational Education. 1971. 95P. ED 072 201.

Calhoun, Calfrey C., et al. Development of Performance Goals for a New Office and Business Education Learning System: Part 1, Analysis of Hardware Used by Office Workers; and Part II. Athens, Georgia: Georgia University, College of Education. Jan. 1970. 83P. ED 073 256.

Cannon, F. B. West Central Vocational-Technical Education Survey. Final Report and Recommendations. Crawfordville, Indiana: New Educational Directions. April 1973. 209P. ED 086 904.

Crawford, L. C. A Philosophy of Distributive Education, A Report of the First Step in the Research Project "A Competency Pattern Approach to Curriculum Construction in Distributive Teacher Education." New York: Council for Distributive Teacher Education. 1967. 110P. ED 019 412.

——General Drafting. Technical Manual. Washington, D.C.: Department of the Army. Oct. 1972. 223P. ED 083 372.

Huffman, Harry and Dale D. Gust. Business Education for the Emergent Office. Columbus, Ohio: Ohio State University. June 1970. 192P. ED 043 754.

Huffman, Harry and others. A Taxonomy of Office Activities for Business and Office Education. Interim Report. Ohio: The Center for Vocational-Technical Education, The Ohio State University. July 1968. 164P. ED 021 140.

Klabenes, Robert E. and Larry D. Bonner. A Project to Develop a Series of Steps and Procedures for Assisting Local Educational Leaders Develop the Competencies Needed to Construct an Occupational Education Curriculum. Lincoln, Nebraska: Nebraska Occupational Needs Research Coordinating Unit. Jan. 1973. 117P. ED 085 494.

Lanham, Frank W. and others. Development of Performance Goals for a New Office and Business Education Learnings System. (Nobels) Final Project Report. Columbus, Ohio: Ohio State University. April 1970. 349P. ED 041 139.

Lanham, Frank W., et al. Development of Task Performance Statements for a New Office and Business Education Learnings System. (Nobels) Final Report. Columbus, Ohio: Ohio State University, Center for Vocational and Technical Education. Sept. 1972. 375P. ED 068 728.

Lawrence, F. H. and Ed. Zane. Institute for Advanced Study in Vocational-Technical Education: Collaborative Roles and Functions of Occupational Education Programs. Final Report. Honolulu, Hawaii: Hawaii University, Honolulu Department of Curriculum and Instruction. 1973. 222P. ED 081 416.

Markowitz, Selma Lee. Articulation of Educational Programs for Nursing-Related Health Occupations. Final Report. Hartford, Connecticut: Institute for Health Manpower Resources. May 1973. 124P. ED 086 903.

Milliken, Mary Elizabeth. Conference on Career Development and Program Articulation in Health. Final Report. Athens, Georgia: Georgia University, Division of Vocational Education. 1972. 104P. ED 079 501.

Nelson, Frank, et al. Simulated Office Education Guidelines for Washington. Olympia, Washington: Washington State Coordinating Council for Occupational Education. 1973. 113P. ED 085 499.

Perkins, Edward A., Jr. and others. Clusters of Tasks Associated with Performance of Major Types of Office Work. Washington: Washington State University. January 1968. 210P. ED 018 665.

——Summary of Recommendations for Vocational-Technical Education in South Dakota. Pierre, South Dakota: South Dakota State Advisory Council on Vocational and Technical Education 1970. 26P. ED 084 405.

——The State Articulation Coordinating Committee Interpretations and Annotations of the Articulation Agreement Between the State Universities and the Public Community Junior Colleges of Florida. (September, 1971 to February, 1974). Tallahassee, Florida: Florida State Department of Education; Division of Community Junior Colleges. May, 1974. 50P. ED 090 850.

Valeski, Tom. A Continuum Model for Competency-Based Training. The Competency-Based Curriculum. Utah: University of Utah. October, 1973. 10P. ED 083 706.

West, Leonard J. and others. Survey of Entry-Level Bookkeeping Activities in Relationship to the High School Bookkeeping Curriculum. New York: City University of New York, New York Institute for Research and Development in Occupational Education. November 1973. 225P. ED 086 873.

APPENDIX A

PLEASE REPLY TO:
DR GERTRUDE M ENLOE
VOCATIONAL CURRICULUM DEVELOPMENT
& RESEARCH CENTER
P O BOX 657
NATCHITOCHES LOUISIANA 71457

STATE OF LOUISIANA
DEPARTMENT OF EDUCATION
LOUIS J. MICHOT
STATE SUPERINTENDENT
P. O. BOX 44064
BATON ROUGE, LOUISIANA 70804

June 16, 1975

Dear Nursing Assistant Employer:

We need your help! We are conducting a study that we believe you will find interesting and helpful to your profession. We are attempting to assemble and validate a complete list of jobs and tasks performed by Nursing Assistants (Nurse Aides, Orderlies, and Geriatric Aides). We will use this information to revise existing vocational curricula in order to improve the quality of training programs being offered for persons in this career field.

We are asking for a little of your time and the results of your experience on the job. Would you, therefore, please review and complete the task inventory stating what you feel the nurse aide is doing in your work situation and how much time is being spent on each task. Please ask one of your nurse aides to complete individually, the other inventory enclosed. Only you can tell us whether these lists are complete and accurate.

Please fill out the brief informational section and follow the directions for checking and rating the tasks on the list. We are depending on you to provide information for improving nursing assistants programs in Louisiana. Please complete and return the inventories in the enclosed self-addressed, stamped envelope by no later than June 30, 1975.

Sincerely,

Gertrude M. Enloe, Ed. D.

GME:ns

enclosures

1. Check tasks you teach now (✓).

2. Add any tasks you teach now which are not listed.

A. COORDINATING AND COMMUNICATING	✓ IF TAUGHT NOW
1. Assist in introducing patient to unit	
2. Assist in recreational activities with patient, such as crafts, games, walks	
3. Assist patient in placing telephone calls	
4. Assist patient in writing letters and messages	
5. Assist with unit admitting procedures	
6. Assist with unit discharge procedures	
7. Assist with transferring the patient	
8. Care for patient's flowers, such as arrange and distribute	
9. File and refile patient charts and records	
10. Obtain and deliver items for patient's personal use, such as newspapers and magazines and mail	
11. Report violations of regulations	
12. Relay information, such as treatments, procedures, and observations to nurse, supervisor, or team leader	
13. Secure patient's valuables	
14. Sort requisitions and charge slips	
15. Use the intercom	
16.	
17.	
18.	
19.	
20.	

1. Check tasks you teach now (´).

2. Add any tasks you teach now which are not listed.

B. MAINTAINING A CLEAN, SAFE ENVIRONMENT	IF TAUGHT NOW
1. Adjust environmental factors in patient's room, such as heating, cooling, lighting, noise and odor	
2. Adjust the hospital beds and side rails	
3. Assemble linen packs	
4. Assemble surgical or obstetrical packs, such as instrument packs	
5. Check and position the signal cord for patient	
6. Clean and maintain EKG equipment after test	
7. Clean instruments and supplies	
8. Clean sterilizing equipment	
9. Distribute supplies and equipment to patient's rooms, such as linen, thermometers, dressings, footboards	
10. Follow proper isolation techniques	
11. Inventory equipment and supplies	
12. Keep equipment and supply trays in order	
13. Make bed (occupied, unoccupied, postoperative)	
14. Operate special position bed (circle, stryker frame, etc.	
15. Practice for evacuation procedures	
16. Prepare equipment, instruments, and material for sterilization	
17. Prepare soiled linen for laundry	
18. Report pests	
19. Report unsafe conditions	
20. Sterilize equipment and supplies in autoclave, such as surgical instruments, linen packs	

1. Check tasks you teach now ( ).

2. Add any tasks you teach now which are not listed.

B. MAINTAINING A CLEAN, SAFE ENVIRONMENT (Cont'd)	IF TAUGHT NOW
21. Sterilize equipment by boiling water or placing in solution such as surgical instruments	
22. Stock and store equipment and supplies, such as utensils, paper goods, linens, disposable materials	
23. Straighten patient's room	
24. Straighten service areas on unit, such as service room, treatment room	
25. Test sterilizer with sterilization color indicators	
26.	
27.	
28.	
29.	
30.	
31.	
32.	
C. CARING FOR THE PERSONAL NEED OF THE PATIENT	
1. Assist in applying or removing artificial limbs of patient	
2. Assist in putting on or removing braces of patient	
3. Assist patient in crutch walking	
4. Assist patient in dressing and undressing	
5. Assist patient in standing	
6. Assist patient in walker use	
7. Assist patient in walking	

1. Check tasks you teach now (✓).

2. Add any tasks you teach now which are not listed.

C. CARING FOR THE PERSONAL NEED OF THE PATIENT (Cont'd)	✓ IF TAUGHT NOW
8. Assist patient to get in and out of bed	
9. Assist with or shave the male patient	
10. Care for or assist patient in caring for hair	
11. Care for or assist patient in caring for toenails and fingernails	
12. Check and position the bedside table and overbed table of patient	
13. Give backrubs to patient	
14. Give general skin care to comatose or semicomatose patient	
15. Give general skin care to patient in casts	
16. Give general skin care to patient in restraints	
17. Give general skin care to patient in traction	
18. Give general skin care to patient with decubitus ulcers	
19. Give or assist patient in taking bath	
20. Give or assist patient with oral hygiene	
21. Move patient between stretcher and bed	
22. Move patient to and from a wheelchair	
23. Position patient in safe and comfortable position	
24. Straighten patient's bedding	
25. Transport patient by stretcher and wheelchair	
26. Use mechanical device to move patient	
27. Provide for privacy of patient	
28.	
29.	
30.	

1. Check tasks you teach now (✓).

2. Add any tasks you teach now which are not listed.

D. ASSISTING WITH NUTRITION AND ELIMINATION NEEDS OF PATIENTS	✓ IF TAUGHT NOW
1. Assist patient in eating	
2. Assist patient in going to bathroom	
3. Assist patient in using bedpan	
4. Assist patient in using bedside commode	
5. Assist patient in using urinal	
6. Assist with or remove fecal impaction	
7. Check food trays against patient diet list	
8. Collect food trays	
9. Distribute drinking water	
10. Feed patient	
11. Give tube feedings	
12. Help patient select diet items	
13. Observe, measure, and report food and fluid intake	
14. Observe, measure, and report output of patient elimination.	
15. Position patient for meals	
16. Serve between-meal nourishment	
17. Serve food to patient .	
18.	
19.	
20.	
21.	

1. Check tasks you teach now (.).

2. Add any tasks you teach now which are not listed.

E. ASSISTING WITH TREATMENTS	IF TAUGHT NOW
1. Administer alcohol baths	
2. Administer cold soaks	
3. Administer hot soaks	
4. Administer medicated baths	
5. Administer oxygen per catheter	
6. Administer oxygen per mask	
7. Administer sitz baths	
8. Administer tepid baths	
9. Apply ace bandages and elastic stockings	
10. Apply cold compresses	
11. Apply cold packs	
12. Apply heat cradles	
13. Apply heat lamps	
14. Apply heating pads	
15. Apply hot compresses	
16. Apply hot packs	
17. Apply hot water bottle	
18. Apply ice bags	
19. Apply non-sterile external medicine	
20. Apply restraints	

1. Check tasks you teach now (✓).

2. Add any tasks you teach now which are not listed.

E. ASSISTING WITH TREATMENTS (Cont'd)	✓ IF TAUGHT NOW
21. Apply rib belts	
22. Apply roller bandages	
23. Apply skin traction	
24. Apply T, straight, scultetus, breast, and triangular binders	
25. Apply thermal blanket	
26. Assist in preventing bed sores	
27. Assist in preventing foot drop	
28. Assist patient in therapeutic exercises	
29. Assist patient to dangle	
30. Assist patient to turn, cough, and deep breathe	
31. Assist patient with postural drainage	
32. Assist physician in application of cast	
33. Assist with EKG test	
34. Assist with irrigating bladder	
35. Assist with or connect catheters and tubing to drainage	
36. Assist with post-mortem care	
37. Collect a clean catch urine specimen	
38. Collect a routine urine specimen	
39. Collect a 24-hour urine specimen	
40. Collect sputum specimen	

1. Check tasks you teach now (√).

2. Add any tasks you teach now which are not listed.

E. ASSISTING WITH TREATMENTS (Cont'd)	√ IF TAUGHT NOW
41. Collect stool specimen	
42. Connect patient to monitor	
43. Do pre-operative shaving	
44. Drape patient for examination or treatment	
45. Empty drainage bottle and bags	
46. Give artificial respiration	
47. Give colostomy care	
48. Give perineal care	
49. Give whirlpool treatments	
50. Instruct and assist patient in regard to disrobing and examining positions	
51. Instruct patient with regard to collection of specimen	
52. Maintain traction equipment	
53. Measure and record contents of drainage bottles and bags	
54. Observe sterile techniques	
55. Position overbed cradles	
56. Position trochanter rolls and sandbag	
57 Prepare and give a vaginal douche	
58. Prepare and give an enema	
59. Prepare ear, nose, and throat tray	
60. Prepare general physical examination tray	
61. Prepare general surgery tray	

1. Check tasks you teach now ( ).

2. Add any tasks you teach now which are not listed.

E. ASSISTING WITH TREATMENTS (Cont'd)	IF TAUGHT NOW
62. Prepare gynecological tray	
63. Prepare injection tray	
64. Prepare necessary materials for minor surgery	
65. Prepare rectal tray	
66. Prepare skin for surgery	
67. Prepare surgical trays and dressings for minor surgery	
68. Prepare tray for dressing change	
69. Prepare tray for prep team	
70. Record pertinent data on specimen container, and place in proper storage	
71. Report appearance of body discharges	
72. Report condition of skin	
73. Set up and regulate aspirator	
74. Set up and regulate humidifier	
75. Set up and regulate oxygen equipment	
76. Strain urine for stones	
77. Measure and record blood pressure	
78. Count and record pulse	
79. Take and record oral temperature	
80. Take and record patient's height and weight	
81. Take and record rectal temperature	

1. Check tasks you teach now (✓).

2. Add any tasks you teach now which are not listed.

E. ASSISTING WITH TREATMENTS (Cont'd)	IF TAUGHT NOW
82. Count and record respiration	
83. Take and record temperature by axillary method	
84. Test urine for acetone	
85. Test urine for sugar	
86.	
87.	
88.	
89.	
90.	

You have now completed the inventory. Thank you for your time and cooperation. Please return the booklet.

TABLE 1 Task Inventory For Nursing Assistant Occupation - Rank Order

Ranked by		PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS	PERCENT OF SCHOOLS INCLUDING TASK IN CURRICULUM
A.	COORDINATING AND COMMUNICATING				
3	Assist patient in placing telephone calls	97	40	37	70
5	Assist with admitting procedures	94	64	60	100
12	Relay information	87	64	56	100
1	Assist in introducing patient to unit	87	63	54	100
7	Assist with transferring the patient	84	65	55	100
6	Assist with discharge procedures	81	65	52	90
10	Obtain and deliver items for patient's personal use	77	50	39	80
11	Report violations of regulations	74	53	39	100
8	Care of patient's flowers	68	46	34	80
4	Assist patient in writing letters and messages	68	36	24	30
2	Assist in recreational activities with patient	65	51	33	50
15	Use the intercom	65	49	32	90
13	Secure patient's valuables	58	56	33	70
14	Sort requisitions and change slips	29	51	14	30
9	File patient's charts and records	23	57	13	10
B.	MAINTAINING A CLEAN, SAFE ENVIRONMENT				
12	Keep equipment in order	100	81	81	90
9	Distribute supplies and equipment to patient's room	97	74	71	90
19	Report unsafe conditions	97	55	53	100
23	Straighten patient's room	94	75	71	100
2	Adjust hospital bed and side rails	94	61	59	100
1	Adjust environmental factors in patient's room	90	67	61	100
5	Check and position signal cord for patient	87	67	59	100
17	Prepare soiled linen for laundry	84	68	57	80
10	Follow proper isolation techniques	81	62	50	90
18	Report pests	74	45	34	90
24	Straighten service area on unit	71	66	47	90
3	Assemble linen packs	71	54	39	80
15	Practice evacuation procedures	68	47	32	80
12	Keep equipment and supply trays in order	61	64	50	70
7	Clean instruments and supplies	61	59	36	80
22	Stock and store equipment and supplies, such as utensils, paper goods, linens, disposable materials	55	64	35	70
16	Prepare equipment, instruments, and material for sterilization	42	52	22	60
14	Operate special position bed (circle, Stryker frame, etc.)	35	64	23	30
11	Inventory equipment and supplies	35	51	50	20

TABLE 1 (Continued)

Ranked by		PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS	PERCENT OF SCHOOLS INCLUDING TASK IN CURRICULUM
8	Clean sterilizing equipment	35	55	19	20
6	Clean and maintain EKG equipment after test	19	43	8	0
21	Sterilize equipment by boiling water or placing in solution such as surgical instruments	16	54	9	30
20	Sterilize equipment and supplies in autoclave, such as surgical instruments, linen packs	13	61	8	10
4	Assemble surgical or obstetrical packs, such as instrument packs	13	33	4	20
25	Test sterilizer with sterilization color indicators	3	4	2	10
C.	CARING FOR THE PERSONAL NEEDS OF THE PATIENT				
10	Care for or assist patient in caring for hair	100	74	74	100
5	Assist patient in standing	100	72	72	100
12	Check and position the bedside table and over-bed table of patient	100	69	69	100
24	Straighten patient's bedding	97	78	75	100
6	Assist patient to get in and out of bed	97	77	74	100
7	Assist patient in walking	97	74	71	100
20	Give or assist patient with oral hygiene	97	72	70	100
4	Assist patient in dressing and undressing	97	68	65	100
27	Provide for privacy of patient	97	67	65	90
19	Give or assist patient in taking bath	94	82	77	100
23	Position patient in safe and comfortable position	94	75	71	100
22	Move patient to and from a wheelchair	94	67	63	100
25	Transport patient by stretcher and wheelchair	94	63	59	90
13	Give backrubs to patient	90	63	57	100
14	Give general skin care to comatose or semi-comatose patient	87	17	62	100
16	Give general skin care to patient in restraints	87	61	53	90
6	Assist patient in walker use	87	59	52	80
21	Move patient between stretcher and bed	84	59	50	100
15	Give general skin care to patient in casts	77	55	43	90
18	Give general skin care to patient with decubitus ulcers	74	83	62	90
11	Care for or assist patient in caring for toenails and fingernails	74	59	44	100
17	Give general skin care to patient in traction	68	61	41	90
3	Assist patient in crutch walking	65	41	27	30
26	Use mechanical device to move patient	55	51	28	70
1	Assist in applying or removing artificial limbs of patient	52	43	22	20
9	Assist with or shave the male patient	45	61	28	90
2	Assist in putting on or removing braces of patient	42	40	17	30

TABLE 1 (Continued)

Ranked by		PERCENT OF SCHOOLS INCLUDING TASK IN CURRICULUM	AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS	AVERAGE PERCENT OF TIME SPENT BY MEMBERS PERFORMING	PERCENT OF MEMBERS PERFORMING
	D. ASSISTING WITH NUTRITION AND ELIMINATION NEEDS OF PATIENTS				
1	Assist patient in eating	100	68	68	100
17	Serve food to patient	97	73	71	100
3	Assist patient in using bedpan	97	72	70	100
13	Observe, measure, and report food and fluid intake	97	72	70	100
14	Observe, measure, and report output of patient elimination	94	74	70	100
8	Collect food trays	94	72	67	100
2	Assist patient in going to bathroom	94	72	67	100
15	Position patient for meals	90	72	65	100
4	Assist patient in using bedside commode	90	63	57	100
16	Serve between-meal nourishment	87	68	59	100
10	Feed patient	84	73	68	100
9	Distribute drinking water	84	72	60	100
6	Assist with or remove fecal impaction	81	60	48	80
5	Assist patient in using urinal	81	59	47	100
7	Check food trays against patient diet list	74	73	54	70
12	Help patient select diet items	45	50	27	90
11	Give tube feedings	29	62	18	50
	E. ASSISTING WITH TREATMENTS				
38	Collect a routine urine specimen	97	68	66	100
53	Measure and record contents of drainage bottles and bags	94	72	68	100
78	Count and record pulse	90	84	76	100
79	Take and record oral temperature	90	81	73	100
26	Assist in preventing bed sores	90	79	71	100
85	Test urine for sugar	90	64	58	100
18	Apply ice bags	90	56	50	100
82	Count and record respiration	87	83	72	100
45	Empty drainage bottle and bags	87	72	63	100
80	Take and record patient's height and weight	87	71	62	100
81	Take and record rectal temperature	87	69	60	100
84	Test urine for acetone	87	68	59	100
37	Collect a clean catch urine specimen	87	64	56	100
30	Assist patient to turn, cough, and deep breathe	84	74	62	100
51	Instruct patient with regard to collection of specimen	84	66	55	100
71	Report appearance of body discharges	84	62	52	100
72	Report condition of skin	84	62	52	100
35	Assist with or connect catheters and tubing to drainage	84	61	51	60
20	Apply restraints	84	57	47	90

TABLE 1 (Continued)

Ranked by		PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS	PERCENT OF SCHOOLS INCLUDING TASK IN CURRICULUM
10	Apply cold compresses	84	55	47	100
8	Administer tepid baths	84	53	45	80
41	Collect stool specimen	84	53	45	100
58	Prepare and give an enema	81	66	53	100
7	Administer sitz baths	81	62	50	100
11	Apply cold packs	81	59	47	100
27	Assist in preventing foot drop	81	57	46	100
39	Collect a 24-hour urine specimen	81	57	46	100
54	Observe sterile techniques	77	71	55	60
29	Assist patient to dangle	77	61	47	100
40	Collect sputum specimen	77	58	45	100
1	Administer alcohol baths	77	48	37	100
77	Measure and record blood pressure	74	84	62	90
15	Apply hot compresses	74	60	45	90
83	Take and record temperature by auxiliary method	74	55	41	100
3	Administer hot soaks	74	55	41	100
2	Administer cold soaks	71	55	39	80
76	Strain urine for stones	71	55	39	80
17	Apply hot water bottle	71	49	35	90
55	Position overbed cradles	71	44	31	80
57	Prepare and give a vaginal douche	68	82	56	80
48	Give perineal care	68	72	49	90
47	Give colostomy care	68	71	48	50
9	Apply ace bandages and elastic stockings	68	55	37	70
25	Apply thermal blanket	65	64	41	30
13	Apply heat lamps	65	59	38	80
36	Assist with post-mortem care	65	54	35	100
19	Apply non-sterile external medicine	58	60	35	50
50	Instruct and assist patient in regard to disrobing and examining positions	58	59	34	70
14	Apply heating pads	55	61	33	80
44	Drape patient for examination or treatment	53	57	29	80
34	Assist with irrigating bladder	51	56	29	50
12	Apply heat cradles	51	57	29	100
4	Administer medicated baths	48	54	26	40
28	Assist patient in therapeutic exercises.	45	56	25	80
70	Record pertinent data on specimen container, and place in proper storage	42	78	33	90
43	Do pre-operative shaving	42	65	27	90
16	Apply hot packs	42	55	23	100
6	Administer oxygen per mask	42	55	23	30
56	Position trochanter rolls and sandbag	39	45	18	70
21	Apply rib belts	39	43	17	10
31	Assist patient with postural drainage	35	65	23	40
52	Maintain traction equipment	35	60	21	40
75	Set up and regulate oxygen equipment	35	60	21	20

TABLE 1 (Continued)

Ranked by		PERCENT OF MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY MEMBERS PERFORMING	AVERAGE PERCENT OF TIME SPENT BY ALL MEMBERS	PERCENT OF SCHOOLS INCLUDING TASK IN CURRICULUM
46	Give artificial respiration	35	44	16	40
5	Administer oxygen per catheter	32	56	18	30
22	Apply roller bandages	32	41	13	30
66	Prepare skin for surgery	29	60	18	70
68	Prepare tray for dressing change	29	60	18	20
74	Set up and regulate humidifier	29	56	16	0
24	Apply T, straight, scultetus, breast, and triangular binders	29	48	14	50
49	Give whirlpool treatments	23	37	8	30
33	Assist with EKG test	23	35	8	30
69	Prepare tray for prep team	22	60	18	20
32	Assist physician in application of cast	19	57	11	20
73	Set up and regulate aspirator	19	52	10	10
59	Prepare ear, nose, and throat tray	16	54	9	30
64	Prepare necessary materials for minor surgery	16	45	7	0
23	Apply skin traction	16	40	6	10
42	Connect patient to monitor	13	61	8	0
60	Prepare general physical examination tray	13	53	7	40
65	Prepare rectal tray	10	71	7	10
62	Prepare gynecological tray	10	62	6	10
67	Prepare surgical trays and dressings for minor surgery	6	64	4	0
63	Prepare injection tray	6	50	3	0
61	Prepare general surgery tray	6	50	3	20

APPENDIX B

PLEASE REPLY TO:
DR GERTRUDE M ENLOE
VOCATIONAL CURRICULUM DEVELOPMENT
& RESEARCH CENTER
P O BOX 657
NATCHITOCHES LOUISIANA 71457

STATE OF LOUISIANA
DEPARTMENT OF EDUCATION
LOUIS J. MICHOT
STATE SUPERINTENDENT
P. O BOX 44064
BATON ROUGE, LOUISIANA 70804

October 16, 1975

Dear Reviewer:

You have been selected to serve on a field review team in your specialty area. Please review the enclosed curriculum and complete the following form. Input from you will be used as a basis for improving certain items before this material is disseminated and used in the classroom. The sequence of instruction, performance objectives and criterion-referenced measures were prepared by a small team of people--this field review makes it possible to gather input from a large number of experts who are potential users of this product.

This performance-based curriculum has been reviewed and approved for dissemination by a committee of supervisors from the Bureau of Vocational Education, State Department of Education. A copy of this evaluation is attached.

Sincerely yours,

Gertrude Enloe
Project Director

GME/clc

Attachment

Instructions to the Reviewer

Carefully review each stated performance objective and criterion-reference measure as well as the scope and sequence of each unit of instruction.

Please complete the following chart by recording any changes or recommendations you would like to see included in the final draft by using the following scale:

5 Satisfactorily stated Performance Objective and Criterion-Referenced Measure

4 Unsatisfactorily stated Performance Objective and Criterion-Referenced Measure

3 Included in your present curriculum in stated scope and sequence

2 Not included in present curriculum in the stated scope and sequence

1 This guide will be useful to me and my students

0 I can not use this guide

Recommended Changes and Comments

Page	Unit Number	Performance Objective Number (Rate 5 or 4)	Criterion-Referenced Measure Number (Rate 5 or 4)	Included in Present Curriculum in this order (Rate 3 or 2)	Not Included in Present Curriculum in this order (Rate 3 or 2)

Comments: 1. This guide will be useful to me and my students as I use performance based material. Yes_____ No_____

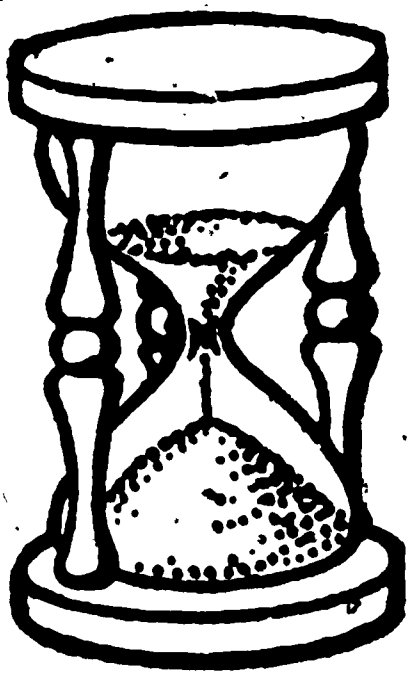
2. I do not care to use this material as a guide or supplement to the material I presently use.

(If you care to make additional comments, please use reverse side of this page)

PLEASE REPLY TO:
DR GERTRUDE M ENLOE
VOCATIONAL CURRICULUM DEVELOPMENT
& RESEARCH CENTER
P O BOX 657
NATCHITOCHES, LOUISIANA 71457

STATE OF LOUISIANA
DEPARTMENT OF EDUCATION
LOUIS J. MICHOT
STATE SUPERINTENDENT
P. O. BOX 44064
BATON ROUGE, LOUISIANA 70804

NOVEMBER 4, 1975



WE REALIZE HOW BUSY YOU ARE

BUT

TIME IS RUNNING OUT.

WE NEED YOUR RESPONSE

TO THE FIELD REVIEW

OF THE

COMPETENCY-BASED CURRICULUM.

PROJECT DIRECTOR,

APPENDIX C

SPECIAL NEEDS ASSESSMENT OF STUDENTS ENROLLED
IN VOCATIONAL-TECHNICAL SCHOOLS

Interviewing Questionaire

School: _____

1. What percentage of your potential (those tested for admittance) students are:

   Special Needs Students? _____
   Physically Handicapped Students? _____

2. Do you have a Special Needs Instructor or Pre-vocational Instructor?
   Yes _____ No _____

3. If so, ho many? _____

4. How many hours per day do your students get special help?
   Maximum hours _____ Minimum hours _____

5. The special help is in the areas of: (please rate 1, 2, 3)

   Language skills _____
   Arithmetic skills _____
   Reading skills _____

6. To what extent do your instructors cooperate with the Guidance Counselor(s) and Special Needs Instructor(s) in the following program areas:

   1. Air Conditioning/Refrigeration? _____
   2. Drafting? _____
   3. Electronics? _____
   4. Nursing? _____
   5. Office Occupations? _____

7. Are you familiar with the competency-based instructional materials developed during the Summer, 1975 by this project staff? Yes _____ No _____

8. Do you think use of competency-based instructional materials will help the Special Needs students? Yes _____ No _____

9. How can the materials developed (competency-based) be changed to aid the Special Needs or Handicapped students?

   Addition _____
   Deletion _____

10. What testing materials do you use to screen your students to determine those with special needs? (Please give titles and publishers)

    _____

    _____

    _____

11. How long does a student remain in a special needs class?

Maximum _____ Minimum _____

12. What teaching materials are used in helping your special needs students? (Please give titles and publishers of materials. If possible, give us a sample)

_____

_____

_____

_____

_____

13. What is your dropout rate (non-completions) from the school in the following areas? (Please estimate if you do not have available data)

Overall school programs _____
Air Conditioning/Refrigeration _____
Drafting _____
Electronics _____
Nursing _____
Office Occupations _____

14. When they drop out, do they usually have a marketable skill?
Yes _____ No _____

15. Do you keep follow-up records on completions? Yes _____ No _____

16. Do you keep placement records? If so, are most students employed in areas of training? Yes _____ No _____

APPENDIX D

INSTRUCTIONAL MATERIALS USED IN SPECIAL NEEDS PROGRAMS

Activities for Reading Improvement. Austin: Steck-Vaughn Company.

Algebra. Austin: Steck-Vaughn Company.

Basic English. Austin: Steck-Vaughn Company.

Basic English Review. Dallas: South-Western Publishing Company.

Basic Essentials of Mathematics, Part I. Austin: Steck-Vaughn Company.

Basic Keys to Spelling. Chicago: J. B. Lippincott Company.

Basic Mathematics Review. Dallas: South-Western Publishing Company.

Basic Reading, Book I. Austin: Steck-Vaughn Company.

Basic Reading, Book II. Austin: Steck-Vaughn Company.

Electronics Mathematics Workbook. Natchitoches, Louisiana: Vocational Curriculum Development and Research Center.

English Practice for Mastery. Austin: Steck-Vaughn Company.

English, the Easy Way. Dallas: South-Western Publishing Company.

Gateways to Correct Spelling. Austin: Steck-Vaughn Company.

Guidebook to Mathematics. Oklahoma City: Economy Company.

Junior High B Programmed Mathematics, ESP Inc., 2304 E. Johnson, Jonesboro, Arkansas.

Language, Book I. Austin: Steck-Vaughn Company.

Language, Book II. Austin: Steck-Vaughn Company.

Mathematics for Auto Mechanics. Natchitoches, Louisiana: Vocational Curriculum Development and Research Center.

Mathematics for Technical and Vocational Schools. John Wiley & Sons, Inc.

Reading for Meaning, Grades 4 - 12. Chicago: J. B. Lippincott Company.

Vo-Tech Vocabulary Study. Pak 2, PLAN, Inc. P. O. Box 6467, Corpus Christi, Texas.

Welding Mathematics. Natchitoches, Louisiana: Vocational Curriculum Development and Research Center.

Working with Numbers. Austin: Steck-Vaughn Company.