DOCUMENT RESUME

ED 272 725 CE 044 831

TITLE Curriculum Study: Health Occupations Education. A Report from the Health Occupations Education Curriculum Study Task Force to the North Carolina Board of Education. 1984-85.

INSTITUTION North Carolina State Dept. of Public Instruction, Raleigh. Div. of Vocational Education.

PUB DATE 85

NOTE 37p.

PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS *Allied Health Occupations Education; *Curriculum Development; *Educational Needs; Educational Objectives; *Educational Policy; Educational Trends; Followup Studies; Instructional Materials; Labor Needs; Needs Assessment; Outcomes of Education; Policy Formation; Program Administration; Program Content; *Program Improvement; Secondary Education; State Surveys; *Statewide Planning; Teacher Certification; Teacher Characteristics; Technological Advancement; Trend Analysis

IDENTIFIERS *North Carolina

ABSTRACT

A study examined health occupations education (HOE) in secondary public schools in North Carolina. A task force consisting of secondary and postsecondary educators, industry representatives, administrators, and program consultants analyzed preexisting data from 11 sources. These included program standards, student followup, and curriculum materials evaluation surveys; the North Carolina state plan for vocational education; an assessment of the impact of technologies of the eighties on HOE; and a 1982 nurse labor force survey. The task force formulated 23 recommendations pertaining to program administration, curriculum, resources and supportive services, and staff training and certification. Included among these were the following: state and local policy should provide for student transportation to clinical work sites, HOE program managers should take immediate steps to form affiliations with health care delivery sites, deviations from program standards should be assessed systematically to determine their impact on students in HOE, consideration should be given to the idea of offering academically oriented students credit for early exploration of health occupations careers, health industry and HOE teacher salary scales should be monitored regularly to keep the two competitive, and the HOE teacher's certificate renewal process should be relevant to the teaching task and technical area. A three-page bibliography concludes the document. (MN)

C U R R I C U L U M S T U D Y: HEALTH OCCUPATIONS EDUCATION

A Report from the

Health Occupations Education Curriculum Study Task Force

To the North Carolina State Board of Education

Division of Vocational Education
North Carolina Department of Public Instruction
Raleigh, North Carolina / 1984-1985

FOREWORD

A task force composed of representatives from education and the health industry has studied the status of secondary Health Occupations Education offered in North Carolina Public Schools and made recommendations contained in this report. These recommendations, if implemented, should provide specific directions for the statewide administration of the program. The information identifies significant issues, supporting rationales, and recommendations resulting from an analysis of current data, in-depth discussions, and personal interviews.

The work done by various members of the Health Occupations Education Curriculum Task Force, the Division of Vocational Education, and the Department of Public Instruction is gratefully acknowledged and appreciated. Their hard work and commitment are exemplified in the comprehensiveness of this report.

Clifton B. Belcher, Director
Division of Vocational Education

Nancy L. Raynor, Chief Consultant
Health Occupations Education
Division of Vocational Education

ACKNOWLEDGEMENTS

The process of organizing and conducting a curriculum study of Health Occupations Education and producing this supporting document has involved the hard work and sacrifice of many individuals. Gratitude is hereby expressed to all those who have labored and/or provided logistical support for the study.

Appreciation is expressed to the members of the Curriculum Study Task Force and to the members of the staff of Health Occupations Education for the many long hours dedicated to the completion of this effort. Gratitude is also expressed to: State Superintendent, A. Craig Phillips; Assistant State Superintendent, Joe Webb; and Division of Vocational Education Director, Clifton Belcher, for their support.

Special appreciation is also expressed to the Associate Director of Program Development, June Atkinson, for her encouragement, leadership, and overall organizational efforts. We are particularly indebted to Carolyn Jernigan for arranging meeting facilities, recording minutes, typing, and editing, as well as the execution of many other tasks without which this document would have been impossible.

CHAPTER I

ORGANIZATION OF STUDY

Formation

During August, 1984, Dr. A. Craig Phillips, State Superintendent of Public Instruction, appointed the Phase II Health Occupations Education Curriculum Study Task Force. This action was taken subsequent to a directive from the North Carolina Board of Education to conduct a Phase I Generic Study of Vocational Education.

Purpose

The Phase II Health Occupations Education Curriculum Study Task Force was charged with expanding the Phase I Generic Study of Vocational Education by responding to its issues and recommendations. In addition, the task force was asked to examine the entire Health Occupations Education program area and to identify relevant issues and recommendations that would ensure program improvement.

Committee

The Phase II Health Occupations Education Curriculum Study Task Force was composed of nine members representing various groups and backgrounds as follows:

High School Principal	Mr. Joe Young Alexander Central High School
Vocational Education Director	Mr. Charles Gibbs Fayetteville City Schools
Community College Representative	Mr. Jim Kemp Caldwell Community College
Health Occupations Education Teacher	Ms. Dusty Edmonds North Surry High School
Disadvantaged/Handicapped Representative	Ms. Rozella Majors-Williams Disadvantaged/Handicapped Teacher Reid Ross High School

Teacher Educator	Dr. Judith Davis Health Occupations North Carolina State University
Health Industry Representative	Mr. Thomas Howerton Program on Access to Health Care North Carolina Hospital Association
Health Occupations Education - Health Occupations Students of America Advisory Board Member	Ms. Mary Alice Sherrill North Carolina Hospital Association
Task Force Administrator/Evaluator	Dr. Bettye MacPhail-Wilcox Education Leadership and Program Evaluation North Carolina State University
Program Consultants/Facilitators	Nancy L. Raynor Chief Consultant Health Occupations Education
	Linda R. Walston, Consultant NC-HOSA State Advisor Health Occupations Education
	Carolyn Jernigan, Secretary Health Occupations Education
	Rhonda Walton, Secretary Health Occupations Education

Procedure

Following the appointment of task force members by Dr. Craig Phillips, a joint meeting of all vocational education program area curriculum study groups was convened at the Jane S. McKimmon Center on September 17, 1984. Because these program area task forces were composed of many persons other than those who were involved in the Phase I Study, the morning session was devoted largely to a review of that study. Trends with implications for vocational education in North Carolina were presented and program area task forces were charged to conduct respective studies by Janaury, 1985. Following the morning general session, program area curriculum study task forces met to review relevant information, to organize, and to plan.

Because of the four month time frame within which this study had to be completed, the Health Occupations Education Curriculum Task Force decided to use existing data as the primary basis for recommendations. Task force members were encouraged to share their data analysis with persons in their respective localities and to gain input for this study. Though it would have been advisable to include a larger and more representative sample of Health Occupations Education teachers in this endeavor, it was not possible given the constraints of time. The following eleven sources of data were used as the basis for this analysis:

1. Program Standards Survey taken August, 1984.
2. 1983 Student Follow-up.
3. Phase I Generic Study.
4. Curriculum Materials Evaluation Survey taken August, 1984.
5. Characteristics of Health Occupations Education Teaching Staff.
6. HEALTH OCCUAPTIONS EDUCATION GUIDE FOR PROGRAM PLANNING AND MANAGEMENT.
7. NORTH CAROLINA STATE PLAN FOR VOCATIONAL EDUCATION.
8. A RESOURCE NOTEBOOK FOR ACTION PLANNING FOR THE FUTURE: NORTH CAROLINA SECONDARY VOCATIONAL EDUCATION, 2000.
9. Health Occupations Education Program Review Five-Year Summary: 1979-1984.
10. TECHNOLOGIES OF THE '80s: THEIR IMPACT ON HEALTH OCCUPATIONS EDUCATION.
11. NORTH CAROLINA NURSE MANPOWER SURVEY, 1982.

Either the documents themselves or citation information for the document is contained in Appendix 1 of this study.

The Health Occupations Education Curriculum Study Task Force accomplished the following activities between September 17, 1984, and January 31, 1984:

1. Task Force roles and responsibilities were clarified.
2. Study group purposes and timelines were reviewed.
3. An orientation to the Health Occupations Education curriculum was presented.
4. Data sources available to the study group were identified.
5. Given a four-month timeline for completing the study, the committee opted to focus primarily on data sources for identifying program issues:
   a. Phase I Study Report.
   b. Follow-up Data Collected for Completers and Leavers of All Vocational Education Students by Program Area.
   c. Fiscal Year 1983 Health Occupations Education Program Review Evaluations.
   d. Teacher Concerns about Health Occupations Education Program Standards.
6. Five ad hoc committees were established, each with a chairperson. They were charged with analyzing the data sources and conferring with others in their respective institutions and developing a list of issues and/or concerns regarding Health Occupations Education. The task force's foci were as follows:
   a. Curriculum.
   b. Program Administration.
   c. Program Resources.
   d. Advisory Councils and Quality Assurance for All Health Occupations Education Program Components.
   e. Data-Base Adequacy and Needs.

Each ad hoc committee deliberated as charged and reported findings to the entire task force at the October 25, 1984, meeting. Open discussion occurred during each report. Each ad hoc committee submitted a written report. In order to keep the focus on Health Occuaptions Education needs relative to the "anticipated

future," Ms. Nancy Raynor made a presentation, "Health Industry Trends and Projections: Implications for Health Occupations Education." In addition, [illegible]ger Shurrer, Director, Division of Accreditation and Program Approval, pres[illegible] an overview of the quality assurance program to the task force. These two presentations were intended [illegible] provide task force members with the knowledge of a strategy [illegible]lating trend data into program issues and to provide information that would serve as a background for deliberations about teacher certification and training.

Following these many activities, ad hoc committees were restructured to conform to the prescribed format for the Phase II study. These new ad hoc committees considered the reports made by members, data presented in the trend analysis, and group discussions as they outlined issues and concerns. They then selected the most pressing issues and concerns for further discussion and analysis. The activity culminated in the first rough draft of issues, rationales, and recommendations for:

1. Curriculum.

2. Program Administration and Quality Control.

3. Resources and Support Services.

4. Background Status of Health Occupations Education.

During November, individual members and ad hoc committees reviewed all data sources, but emphasized the Fact Sheet on Characteristics of Health Occupations Education Teaching Staff in North Carolina in order to prepare staffing recommendations for the next whole group meeting. In addition, the compiled recommendations of each working group were reviewed by rotating the ad hoc committees thrcugh one-hour study periods on the draft documents. Each ad hoc committee edited, revised, deleted, or added to the draft recom[illegible], and these were incorporated into a second rough draft.

Durin[illegible] Dece[illegible]ber, [illegible] second rough draft was circu[illegible]ed to individual [illegible] for [illegible] review. They were asked to sha[illegible] the contents with [illegible] others and provide feedback to the committee chairperson. In December [illegible] recommendations were incorporated into a draft report which was submitted to the Chief Consultant of Health Occupations Education and the task force was tentatively discharged.

CHAPTER II

BACKGROUND STATUS OF HEALTH OCCUPATIONS EDUCATION (DEMAND)

Program Philosophy and Descriptions

The secondary comprehensive Health Occupations Education program in North Carolina attempts to meet present and predicted demands for health workers within the diverse occupations identified in the health field. The program is designed to stimulate and motivate students' interests in the health services industry, to help them prepare for job opportunities as assistants on the health team, and to help them prepare for further education. Courses are organized to utilize skills training as a means of teaching a common core of concepts pertinent to the pursuit of a health career.

The competency-based curriculum for Health Occupations Education uses the cluster approach and encompasses classroom and laboratory experiences aimed at developing conceptual understanding of personal, family, and community health maintenance and disease control; ethical and legal aspects, communication skills, and health sciences as related to the diagnosis, treatment, and rehabilitation of diseases/disorders. A multiplicity of simple to complex outcome competencies that represent commonalities within the scope of various health occupations are applied by students through clinical internships within cooperating health agencies and institutions.

Opportunities for leadership development and application of learned instructional competencies are provided by means of student participation in the North Carolina Association of Health Occupations Students of America (NC-HOSA). This student organization has become an integral component of the Health Occupations Education instructional program.

Major Program Objectives

As an integral part of the total secondary school curriculum, Health Occuaptions Education programs are designed to enable male and female students:

1. To select a career in the health care delivery system best suited to individual needs, abilities, and career objectives.

2. To develop and apply basic core competencies that will prepare them with entry level skills for immediate employment as noncredentialed assistants.

3. To develop and apply basic core competencies that will prepare them for pursuit of a health career through further education.

Scope and Sequence of Health Occupations Education

Health Occupations Education is comprised of a core of related units of study and instructional learning experiences designed to impart concepts required to support the health team. Competency-based instruction is organized to prepare students for occupational objectives concerned with assisting qualified health personnel in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to consumers.

In a comprehensive Health Occupations Education program, Introduction to Health Occupations Education (7930) is offered at Grade 10, followed by Health Occupations Education I (7931) at Grade 11, and Health Occupations Education II (7932) at Grade 12. Prerequisites to Health Occupations Education I include Health Education (0098) and Biology (3111).

Introduction to Health Occupations Education (7930) ideally is a semester, one-hour elective course designed to orient students enrolled in Grade 10 to the organizational structure of the health industry and career ladders; to create an awareness of employment equities that include sex, race, and academic capabilities; and to develop an understanding of on-the-job health and safety standards as a health team member. It is an introductory approach that encourages the learning of basic concepts, especially those that deal with medical terminology, the diagnostic process, and health care/maintenance delivery systems.

This curriculum affords the scheduling flexibility to accommodate both schools offering semester and/or yearlong offerings. Although not a required prerequisite, it is strongly recommended that Course 7930, Introduction to Health Occuaptions Education, be a part of the Health Occupations Education scope and sequence in each school and afford sophomore students the opportunity to determine further need for such preparation in relation to their potential career pursuits. Students interested in health careers have need for individual educational plans that include skills related to math, science, social studies, and business/clerical. Suggested guidance and scheduling models are found in the SECONDARY HEALTH OCCUPATIONS EDUCATION A GUIDE FOR PROGRAM PLANNING AND MANAGEMENT (revised).

Health Occupations Education I (7931) is designed as a yearlong, one-hour elective course for students in Grade 11. A more in-depth teaching/learning approach to a common core of health maintenance and health care competencies, health and safety standards, employment equities/opportunities, energy conservation, and practical life skills are presented through the application of some health assistant psychomotor skills. A major emphasis is placed on health sciences as they apply to the study of diagnosing and treating diseases/disorders, self-health care, and related health careers.

Twelfth (12th) grade students may enroll in Health Occupations Education I only if their occupational objective is complemented by a program or pattern of courses relevant to these learning experiences; e.g., Business and Office Education students desirous of a medical secretary career, Marketing and Distributive Education student desirous of a sales and marketing career as a pharmaceutical sales representative, Home Economics students aspiring to a career in hospital dietetics, or a student with academic preparation aspiring toward further education in pursuit of a health career. Successful completion of

Health Education (0098) and Biology (3111) is required for any student before entering Health Occupations Education I.

Health Occupations Education II (7932) is a yearlong, two-hour block, elective course organized for those students in Grade 12 who have completed Health Occupations Education I and who are interested in pursuing immediate employment and/or further education within a postsecondary institution.

Second semester students spend a majority of time on rotating clinical internships located in affiliating health agencies. While on clinical internships, no wages are paid. Supervision and evaluation are major responsibilities of the Health Occupations Education teacher. Liability insurance for negligent acts must be obtained for these students prior to clinical rotations.

It is especially important that students interested in immediate employment complement their Health Occupations Education enrollment with business related offerings. For those who are interested in further education, additional science, math, and social studies offerings are needed.

Historical Development of Health Occupations Education

The Legislation

Funding for public school vocational education began with passage of the Smith-Hughes Act in 1917. This legislation provided for establishment of agriculture, trade and industrial, and home economics education. Under each subsequent authorizing legislation, agriculture education, trade and industrial education, and home economics education were maintained and other program areas added. A few practical nurse education programs were established under the auspices of trade and industrial education, but it was not until the Health Amendments Act of 1956 that health occupations education became an identified part of vocational education. The George-Barden Act of 1946 was authorizing legislation, and the Health Amendments Act of 1956 was incorporated with the George-Barden Act to authorize funding of the health occupations education programs.

Except for temporary programs during World War II, the first Federal legislation to address specifically the area of health workers was the Health Amendments Act of 1956. Though general vocational education programs had previously permitted training for vocational practical nurses, the Health Amendments Act made special provisions for such training.

The Health Amendments Act of 1956 was enacted on August 2, 1956. The Act consisted of five separate titles: Title I, Public Health Personnel Graduate Training; Title II, Advanced Training of Professional Nurses; Title III, Practical Nurse Training; Title IV, Extension of the Hospital Survey and Construction Act; and Title V, Mental Health.

Title III of the Health Amendments Act of 1956 established funds specifically for practical nursing and health occupations education, and this funding has continued to the present. The other sections dealt with specific populations and were not related to the vocational aspects and intentions of this legislation.

According to the 1956 Act practical nursing was to be "improved and expanded" in states with state plans reflecting such endeavors. Funding for a period of four years, starting in June of 1957, was in the form of grants to states not to exceed $5,000,000. State allotments were made from the United States Commissioner of Education to approved states on the same formula ratio established by the George-Dean Act, based on the population as of March 18, 1950. The first two years of appropriations were at the rate of seventy-five percent of cost while only fifty percent of cost was funded during the last two years.

North Carolina's Secondary Schools Health Occupations Education

Health Occupations Education programs in the secondary schools of North Carolina began during the 1963-64 school year with three pilot projects. Schools within the districts of Alamance County, Wake County, and Chapel Hill City were selected as the target schools for the first programs. Health occupations education programs were developed under the general auspices of the Division of Vocational Education in the North Carolina State Department of Public Instruction. Initially, the Trade and Industrial Education program area was responsible for the health occupations education programs. From its outset until 1971, the program was exploratory in nature. By 1971, approximately thirty teachers were employed.

In 1971, the Department of Health, Education, and Welfare suggested that the health occupations education program become a separate unit within vocational education. Following national trends and considering available funding, North Carolina reorganized its existing health occupations education programs.

A North Carolina Health Occupations Education Advisory Committee composed of health industry representatives and educators began to reexamine the program. The Committee addressed health occupations education philosophy, goals, objectives, curriculum concepts, standards, and entry level job skills needed by students in secondary schools. Recommendations were made by the advisory committee for reorganization.

By using the background expertise of the committee and the identified competencies needed in various health fields, a competency/test item bank was developed for the health occupations education field test programs. In selecting competencies to be included, a large number were compiled and coded. If a competency was required in five or more job classifications (as defined by the United States Department of Health, Education, and Welfare), that competency was included in the bank. The material for each course was developed so that throughout the state, each local education agency would be teaching the same content.

The statewide program has grown to the current level of 150 programs and 164 teachers. These programs enroll approximately 10,000 students.

Currently, health occupations education is organized as a program area within the Division of Vocational Education. At the national level, Health Occuaptions Education is in the United States Office of Education, Vocational and Adult Technical Education. States have the option to establish health occupations education programs for secondary and/or postsecondary levels. Since there is a variety of state organizational patterns, one description of state

organization is not possible. In North Carolina, the educational system functions under two separate state boards of education with secondary schools (K-12) and community colleges, each having a health occupations education program area.

Future Perspectives

The health industry has grown to a $350 billion dollar business per year with over five million employees. Factors leading to the increased use of health care services include population growth, changes in private insurance coverage, and the intensifying role of the federal government to provide better access to health care for the poor and the aged. Today's major differences in the amount of utilization of health services between the poor and the nonpoor that existed a year ago seem to have diminished. Growth in the utilization rate and broadening of the types of services offered have also resulted in an increased demand. These circumstances call for additional allied health personnel.

Although the use of health services in general will almost certainly continue to increase, the Commissioner's Advisory Panel on Health Service Needs concludes that the demand for health services will increase at a decreasing rate as compared to that of the previous two decades. Various forces and counterforces will be responsible for this trend.

General Social Trends

The demand for health services will undoubtedly be affected by the sheer size of the population in future years. In 1960, the population of the United States numbered 180 million; the estimate for 1990 is over 250 million. However, the changing characteristics of the population may be even more important in determining demand than the expanding size.

The United States population is aging. Between now and the year 2000, the over 65 age group will have grown by 40 percent and the 40 to 64 age group by 50 percent. North Carolina statistics reveal that by 1990, 600,000 of its population will be 65 years old. This aging trend has been called a "built in time bomb" for medical care spending since the incidence of chronic disease, more associated with the aged than the young, is predicted to rise.

An anticipated "baby boom" in the 1990s will accompany the aging trend to produce a situation that will demand health care needs of the very young and the very old. The school health movement will almost certainly increase in strength as the numbers of preschool and school age children rise.

The demand for health services will be further increased by certain socioeconomic trends already long established and likely to continue. As the nation's citizens become more educated, urbanized, and affluent, they expect more and better services.

Health-related behavior patterns must also be regarded as important factors. Such self-destructive behaviors as drug abuse and alcoholism show no sign of abating. Demand for health services relating to these problems is likely to increase.

There is growing evidence that in the United States today health is no longer significantly related to income, except perhaps among the very poorest

segment of society. Health status is, however, closely related to education. It depends on the ability of better-educated people to delay gratification and to change or curb their unhealthy behavior and, to a lesser extent, on the availability of health care. Recent years have seen the public becoming more health conscious, paying greater attention to forming good personal health habits. Such movements emphasize the growing importance of preventive medicine and health promotion. Both of these require health services although its delivery may be altered when compared to traditional approaches.

Reimbursement Patterns

Reimbursement is a major factor in the demand for health care services and the type of services that may be used. Cost containment remains a controversial issue in the health industry. Health Maintenance Organizations, Diagnosis Related Groupings, and higher insurance deductibles are but three strategies for coping with limiting costly hospitalization. Alternatives to institutionalization such as ambulatory surgery, day health care centers, home health programs, and urgent care centers are being developed to improve access to care and reduce the cost of providing care.

Coverage of dental services is expected to increase dramatically as many more workers participate in prepaid dental plans. It is estimated that 68.6 million persons will have such coverage by 1990.

A comprehensive health insurance plan can become a reality by the year 2000. When such a program is implemented, there will be an increase in demand for health services and for health employees. Such developments call for careful monitoring of changes that can have an impact upon the demand for health workers. It appears essential to establish a data base that can be utilized to identify labor market projections based on current information.

New Technology

The Advisory Panel on Health Service Needs predicts that the total expenditures for new technology will increase at a decreasing rate as compared to the seventies. Stanford Research Institute data show that the tendancy is now to order larger quantities of less expensive equipment for many services. For example, Computerized Axial Tomography (CAT) scanning equipment expenditures have dropped from about $100 million to $20 million, whereas expenditures for ultrasound equipment has risen from approximately $30,000 to $100 million.

Americans continue to have a concern with acquiring and preserving good health. Demand for health services will continue to increase, although the rate of increase will be diminished, as alluded to earlier. The mix of health professionals and workers will change. Hospitals will not continue significant growth in bed capacity, but improvements and provision of new technology will call for a higher level of sophistication in the preparation of technicians and workers.

There is ample evidence that the demand for well motivated, well prepared health employees will continue to be strong. Emphasis in the future should be placed upon close examination of the types of health workers needed to respond to the evolving health care system.

CHAPTER III

PROGRAM ADMINISTRATION

In order to operate any program of studies or curriculum, certain things are essential. Among these are a clear statement of philosophy, goals, and objectives. Though these guiding statements were a primary subject of the Phase I Study, it was essential to review these for the purpose of the Phase II Study. Once determinations have been made about the ends which a program is to achieve, it is equally essential to define the means by which those ends will be attained. These means include the definition of a program like Health Occupations Education, the development of mechanisms for acquiring and distributing appropriate resources, the acquisition and deployment of appropriate staff resources, the determination and implementation of a functional support system, an administrative mechanism for managing the program, and a means of assessing the effectiveness of the program relative to the demands for a program. It should be noted that the changing context in which public schools are embedded demands the close monitoring of program performance as well as the relationship between societal demands and programs provided.

Accepting the program objectives and philosophy of Phase I in this study, the ad hoc committee for program administration was composed of three subcommittees in this study. One of the ad hoc committees dealt with the plan for program monitoring, or quality control. A second subcommittee within this area focused on an assessment of the data base used to insure the linkage between the program provided and the program demand given societal conditions. The third subcommittee dealt with all other mechanisms by which program objectives were carried out and insured. For example competency record management, the acquisition and distribution of resoruces, the flow of information, planning processes, and the like, were concerns with which this subcommittee dealt.

Given the intent and scope of this study, each subcommittee was asked to identify only issues which were repeatedly evident in the multiple data sources used. Hence the following recommendations and those in other subsequent chapters are not intended as a laundry list of every little concern that each person might have expressed in one of these data sources. Rather, they are intended to reflect significant issues which the committee feels should be addressed in order to maintain a quality Health Occupations Education program.

The program administration issues deemed worthy of further consideration by this task force deal primarily with access to essential resources, resource distribution, program articulation, design, and monitoring.

Issue 1

Transportation - Access to Program

Rationale

Participation in a clinical learning experience is essential for skill development in the Health Occupations Education curriculum. Federal Funds are distributed to local education agencies without requirements that they be used to provide student transportation to clinical sites. Practices vary across districts in North Carolina. For example, some districts provide no transportation to Health Occupations Education students, some districts rely on students to provide their own transportation to clinical sites without reimbursement, some districts provide buses or vans for this purpose, some teachers in some districts provide student transportation using their own personal cars and this is often without reimbursement. Clearly there is a need for a mechanism which will ensure that students in the Health Occupations Education program do have access to clinical work sites.

Recommendation 1

Because clinical experience is a vital component of the Health Occupations Education program, state and local policy should provide for student transportation to clinical work sites. While the policy need not standardize one method for addressing this need, it should ensure that each student in the program has a reasonable opportunity to acquire this program component.

Issue 2

Clinical Learning Experiences - Congruence With Labor Market

Rationale

Since the 1950s, new occupations have emerged in the field of allied health. Some of these are biomedical equipment technology, holistic health care, industrial health maintenance, and geriatric home care. If Health Occupations Education is to prepare students for employment in these areas, then the program of studies must afford appropriate clinical experiences in each of these emerging occupations.

Recommendation 2

Program managers (teachers) of Health Occupations Education should take immediate steps to seek affiliations with health care delivery sites in which newer occupations exist so that appropriate clinical experience for students may be incorporated into the curriculum. While the traditional hospital setting remains an important component of Health Occupations Education, the addition of these new clinical experiences will enable the Health Occupations Education teacher to tailor the program to the career objectives to each individual student.

Issue 3

Clinical Educational Experiences - Job Site Access

Rationale

Because skill attainment in the clinical setting is a vital component of Health Occupations Education, program implementation in the local education agency has been dependent upon the availability of appropriate clinical sites. As a consequence of this, some regions, (particularly Region 1 in some localities) have unequal access to Health Occupations Education programs. As the population continues to age and health occupations continue to emerge in response to this demographic trend, alternative means of providing clinical experiences for students in this region and these districts must be explored.

Recommendation 3

Administrators should assist the region and localities without a program to investigate whether or not there are nontraditional health occupation sites available in that locality which might provide an appropriate clinical experience. In addition, where such facilities are not in existence or show no evidence of developing, administrators should investigate as a last resort the feasibility for developing and implementing simulated experiences in a clinical setting like those available in psychomotor skill laboratories.

Issue 4

Advisory Committees - Program Relevance

Rationale

Though current program guidelines specify that each Health Occupations Education program should have a local advisory committee, they do not seem to be functioning as well as they might. The advisory committee is one very important means of bridging the gap between public schools and industry. This is especially critical in a period of time during which new health occupations are emerging in the private and public sectors. And, it is equally important to public school programs in times during which public perception of accountability is unsatisfactory.

Recommendation 4

Because satisfactory guidelines and suggested purposes for the use of advisory committees in Health Occupations Education already exist, the State Board of Education should provide leadership in implementing these provisions. This might entail training for health occupations teachers that would raise their awareness of the importance of this linkage between the public school programs and the larger school community. In addition, the formal communication network for reporting advisory committee members should be expanded to include the transmission of substantive discussions and activities to the state level so that this information might be incorporated into the data base guiding program development and implementation.

Issue 5

Program Standards - Deviations

Rationale

The Health Occupations Education program has a set of standards for the program. Data indicate that these standards are not consistantly operationalized throughout the local education agencies in the state.

Recommendation 5

While the task force recognizes that any program included in the state basic education definition should adhere to minimal guidelines and standards, Health Occupations Education is funded through a combination of federal, state, and local monies. Though some of the deviations from program standards may require correction, it is also possible that deviations are reasonable and essential from a local perspective. Therefore, deviations from program standards should be systematically assessed to determine whether or not they jeopardize, enhance, or have neutral effects on the student in Health Occupations Education.

Issue 6

Program Articulation - Basic Skills

Rationale

For the last 15 years, the public has voiced consistent concern about students acquiring basic skills or minimal levels of competence in public education. Health Occupations Education requires that students apply the basic skills which they may have acquired in other curriculum components. However, given public demand for increased performance levels in the basic skills, Health Occuaptions Education programs should systematically ensure that these skills are reinforced in program learning experiences.

Recommendation 6

Because the definition of basic skills changes over time, program administrators should systematically and regularly monitor the definition of basic skills and incorporate the application of those skills into the learning activities by which the Health Occupations Education curriculum is delivered.

Issue 7

Program Content - Relevance

Rationale

In order to maintain the vital link between Health Occupations Education and employment opportunities in both the private and public sector for allied health, the content of the curriculum should be tightly linked to changing occupations and technologies in the field. For the past 30 years, allied health professions have been experiencing a revolution in job content as well as technologies used on the job.

Recommendation 7

Program administrators should ensure that the curriculum in Health Occupations Education reflects the knowledge, skills, attitudes, and values required for successful employment in new and emerging health occupations and ensure that the latest technologies used in these fields are an integral part of the training provided by the public schools. In addition, the State Board of Education and local education agencies are strongly encouraged to develop opportunities for Health Occupations Education teachers to acquire training and clinical experience in these new settings and with these new technologies.

Issue 8

Support Services - Alternative Delivery Systems

Rationale

There are presently two full time state consultants in Health Occupations Education. Massive changes in the health occupations profession affecting job content and technology used within these occupations have occurred. Given the pervasiveness of these changes and the limited state staff, mechanisms must be found which will ensure the delivery of appropriate inservice and staff development activities, curriculum adjustment, program evaluation, and the effective use of advisory committees.

Recommendation 8

A mechanism by which these services can be delivered to local education agencies with Health Occupations Education programs should be developed and implemented. The mechanism might, like other disciplines, provide a regional consultant, or it might formally recognize Health Occupations Education Regional Leadership Council Chairpersons which were established statewide in 1983-84. However, teachers serving in this role are not recognized formally or remunerated for their services. In addition, the functional roles that these individuals play might be incorporated in to the career ladder plan for the state.

Issue 9

Program Monitoring - Follow-up Action

Rationale

Though there is a state program review system applied to Health Occupations Education, it is on a five-year cycle and the outcomes of this review are not systematically incorporated into local program adjustments in a timely manner.

Recommendation 9

While the five-year time cycle for this program review may be appropriate for the state level long-range planning process, changes in the health industry are occurring so rapidly that it does not seem sufficient for short-term planning and program adjustment. With the assistance of a regional program administrator, local education agencies with Health Occupations Education programs should schedule interim annual evaluations which rely extensively on the input of advisory committee members. The outcome of these interim evaluations should be shared in an annual report with regional and state consultants and they should be used as a basis for program adjustment at the local level.

CHAPTER IV

CURRICULUM

Curriculum is defined in many different ways. For the purpose of this study curriculum is the means by which the program goals and philosophy are operationalized. It reflects the values, attitudes, skills, and knowledge that are delivered through the Health Occupations Education program as well as the pedigogical strategies used by Health Occupations Education teachers.

As a logical beginning the task force deliberated about the appropiateness of the Health Occupations Education program philosophy and goals as they currently exist. Given public sentiment and the data sources listed previously in this document, the task force concluded that the current program philosophy and goals reflect the vocational education philosophy and that both are based on observable trends in allied health industries as well as appropiate educational technologies. As a logical second consideration, the task force examined the conceptual curriculum design. After considering the allied health job market, the credentialing requirements for allied health professions in North Carolina, the community college and university offerings for Health Occupations Education, the task force concluded that the current design for cluster curriculum should be maintained.

Issue 1

Horizontal and Vertical Articulation - Curriculum Content

Rationale

There is increasing emphasis on students acquiring adequate training in the sciences. In addition, academic students who are preparing for professional careers in Health Occupations Education have limited opportunity for either the survey or experiential component of training the Health Occupations Education offers in the high school. There appears to be a substantial complement between the curriculum content in Health Occupations Education, Biochemistry, and Human Biology.

In addition, much emphasis has been placed on operationalizing vertical articulation between secondary and postsecondary educational programs. Credentialing requirements, organizational structures, and curriculum emphases inherent in nursing and allied health programs at the postsecondary level frequently impede an appropriate articulation for the graduate of secondary Health Occupations Education. However, some local situations have been successful in affording students advanced placement and/or credit for secondary Health Occupations Education.

Recommendation 1

The task force recommends that a comparative content analysis between Health Occupations Education in Biology and Chemistry curricula be undertaken. Based on this analysis, consideration should be given to the possibility of offering science credit to academically oriented students who could profit from and have interest in early exploration of health occupations careers.

Recommendation 2

The task force recommends that collaborative efforts be enhanced to ensure vertical articulation wherever feasible. Moreover, successful models should be publicized to increase local interest and potential for implementation.

Issue 2

Special Needs Students - Curricula Modifications

Rationale

Given past history of changes in vocational education enrollment resulting from changes in high school requirements, the trend to increase the number of credits required for graduation will likely result in an increase in the number of special needs' students enrolling in Health Occupations Education. While many of these students are expected to perform adequately, even exceptionally, some will need curriculum modifications if they are to be successful in this program.

Recommendation 3

Curricula guidelines for special needs students who will need special curricula adjustments should be drawn up and disseminated to local education agencies. These adjustments will likely include content, process, and time modifications.

Issue 3

Health Occupations Students of America (Student Organization) - Opportunity to Implement

Rationale

The activities of the Health Occupations Students of America activities are an integral part of the Health Occupations Education curriculum. However, the data indicate that Health Occuaptions Education teachers have insufficient time during the day to work with students in the activities of this organization.

Recommendation 4

Wherever possible local education agencies are encouraged to provide a planning period for the Health Occupations Education teacher, which can in part be used to carry out the planning and implementation of activities for the Health Occupations Students of America. In addition, wherever possible, local education agencies are urged to provide a regularly scheduled block of time during the school day for student activities such as those associated with the Health Occupations Students of America association.

CHAPTER V

RESOURCES AND SUPPORT SERVICES

It is impossible to offer a quality program without adequate fiscal resources; however, fiscal resources are translated into physical, human, temporal, and technical resources. These four major resources are combined to create a program of studies which is supplemented by many support services. Support services include a variety of components ranging from insurance and transportation to career counseling. Major concerns with resources and support services generally focus on the quantity available, the quality of the resources, the effectiveness and efficiency of those resources.

Issue 1

Vocational Guidance Counselors - Access to Information

Rationale

High school students rarely have sufficient life experiences or employment experiences to determine occupations they might like to pursue. In addition, health career occupations are changing so rapidly that it is difficult for academic counselors to remain abreast of occupational developments in allied health fields. Across the state of North Carolina, there is unequal access to vocational guidance counselors in the public schools. They are not employed in every high school setting and there is evidence that the profile of students by gender and race in Health Occupations Education does not parallel that profile in the general population of this state or the nation.

Recommendation 1

While the task force encourages the State Board of Education to provide a vocational guidance counselor who can supply career information, entrance requirements for Health Occupations Education beyond the high school level, information about scholarships and loan programs available to the student, and assistance with the development of an appropriate high school program, it recognizes alternative strategies for meeting these needs. Consideration should be given to encouraging Health Occupations Education teachers, either through certification or inservice training, for this capacity. In addition, there are a number of computerized programs that might be placed in the academic guidance suite and made available to students in Health Occupations Education.

Issue 2

Equipment, Materials, and Supplies - Adequacy

Rationale

Health Occuaptions Education teachers consistently report that most programs in North Carolina do not have adequate equipment, supplies, and materials to teach the core student competencies identified in the Health Occuaptions Education curriculum. This deficiency suggests that it may be impossible from the local perspective to upgrade these resources so that students have access to the advanced technologies now being used in entry level positions within health occupations.

Recommendation 2

A systematic assessment of equipment, supplies, and material inventories for Health Occupations Education programs at the local level should be conducted. The standard for this assessment should be the state Health Occupations Education Equipment and Supply List and the Health Occupations Education Curriculum Materials List. This information, in addition to an amendment to these lists which reflects the latest computerized and digital equipment, supplies, and materials characteristically found in the industry should be used to develop a budgetary request by the local vocational education director and the chief state consultant for Health Occupations Education. This document should also reflect an annual assessment of the condition and cost for repairing and maintaining equipment, supplies, and instructional materials.

Issue 3

Student and Teacher Liability - Access to Clinical Sites

Rationale

As the health industry has become increasingly involved in litigation about malpractice and negligence, it has become imperative for students and teachers to have medical liability insurance in order to work in a clinical setting. In addition, the growing emphasis on health maintenance and health care seems to be generating a demand from health agencies that students and teachers working in a clinical setting be required to have physical examinations.

Recommendation 3

Restrictions placed on students and teachers by health agencies can prevent their access to a critical program component in Health Occupations Education. Medical liability insurance has become essential. Though federal monies for Health Occupations Education can be used to provide liability coverage, there is substantial variation across the state in whether or not local education agencies opt to expend funds in this matter. We, therefore, recommend that the state of North Carolina provide for medical liability insurance for teachers and students in Health Occupations Education. While it appears that the demand for physical examinations is growing, it is not clear that it is a requirement with sufficient incidence to warrant state funding yet. We, therefore, recommend that this

demand from health agencies be systematically monitored.

Issue 4

Textbooks - Adequacy

Rationale

The books included on the state adopted list of textbooks for Health Occupations Education are not adequate for meeting the demands of the scope and sequence in the Health Occupations Education curriculum. Though there are many appropriate texts available, some of the best are not included in textbook adoption consideration because publishing companies do not submit them. Yet, it is essential for state adopted materials to reflect the scope and sequence of the curriculum in which they are to be used.

Recommendation 4

While the task force realizes that publishing companies cannot be required to submit their textbooks for examination, alternatives exist which might improve the link between the scope and sequence of the curriculum and materials used in the delivery of it. For example, the state adoption process of textbooks for Health Occupations Education might be changed by recommending that local education agencies adopt texts listed in the Health Occupations Education curriculum materials listing. In addition, textbook monies might be increased to allow localities to purchase supplemental books to meet these needs. Otherwise, the state agency should find the means of encouraging the publishers of books/instructional materials which are more appropriate to the Health Occupations Education scope and sequence to submit them for examination.

CHAPTER VI

STAFF IN HEALTH OCCUPATIONS EDUCATION

A. A Profile of the North Carolina Health Occupations Education Teachers - 1983

1. Total number of teachers: 155

2. Total number of programs: 151

3. Education level of teachers:
   North Carolina Licensed Registered Nurses
   Master's Degree (University/College)
   Bachelor's Degree (University/College)
   Diploma (Hospital School of Nursing)
   Associate Degree (Community College)

4. Certification Process

   a. Current

   - Must be North Carolina Licensed Registered Nurse.
   - Must have three years work experience in either supervision/teaching; one of the three years of work experience must be concurrent with year of application for North Carolina public school teaching certificate.
   - Must complete North Carolina Division of Certification Application for Teacher Certification.
   - More frequently issued a PV (provisional vocational), PVA (provisional vocational academic), PVG (provisional vocational graduate) teaching certificate.
   - Deficiencies that justify provisional certification usually include educational course work up to eighteen semester hours. By the fourth year of teaching, all deficiencies must be removed and a cleared certificate issued.

   b. Projected, 1985; Two-Track Delivery System

   - North Carolina State University Health Occupations Teacher Education Program; graduate and undergraduate (Nursing and Allied Health Personnel) certification through the Quality Assurance Program (QAP).

. Existing process (4a).

c. Concerns/Issues

. Complexity of certification process hampers teacher recruitment.

. Salary differential between industry and public schools in selected geographical locations hampers teacher recruitment.

. Projected career ladder program raises questions regarding incentives for maintaining teachers.

. The emphasis on psychomotor skills in teacher education needs attention.

(NOTE: The following statistics pertain to Health Occupations Education teachers who are registered nurses. Equivalent data for other new allied health occupations are not readily accessible.)

5. Certification status of 1983-1984 teachers

. Total number of provisionally certified teachers: 18 - 11.6%

. Total number of clear non-degree "V" certified teachers: 98 - 63.2%

. Total number of clear "VA" certified teachers: 38 - 24.5%

. Total number of clear "VG" certified teachers: 1 - 0.6%

Source: Health Occupations Education Degree and Non-Degree Teacher Certification Status: 1983-1984, North Carolina Division of Vocational Education, North Carolina Department of Public Instruction, Raleigh, North Carolina.

6. Teacher Age Profile (*1981 Data)

. 22-31 years - 17%

. 32-41 years - 34%

. 42+ years - 49%

Source: Stevens, Rachel, Professional Education and Technical Education Needs of Health Occupations Education. A Thesis submitted to the faculty of North Carolina State University, 1983.

*Data reflect 72 responses out of a potential of 155.

7. Salary Ranges (Licensed Registered Nurses; North Carolina)

a. Health industry (Hospitals - Mean Base Wage)

Experience	<100 Beds	100-250 Beds	251-500 Beds	>500 Beds
No Experience				
(Hr.)	$6.75	$6.96	$7.37	$7.43
(12 Mo.)	$13,632	$13,363.20	$14,150.40	$14,265.60
1 Year				
(Hr.)	$7.10	$7.30	$7.75	$7.88
(12 Mo.)	$13,632	$14,016	$14,880	$15,129.60
2-4 Years				
(Hr.)	$7.42	$7.68	$8.31	$8.46
(12 Mo.)	$14,246.40	$14,745.60	$15,955.20	$16,243.20
5-10 Years				
(Hr.)	$7.93	$8.21	$9.27	$9.42
(12 Mo.)	$15,225.60	$15,763.20	$17,798.40	$18,086.40

Source: 1982 North Carolina Manpower Survey North Carolina Health Education Centers Program, Chapel Hill, North Carolina.

National Data found to date nonspecific; indicated southern states below mean base wage. The absence of unions may be an influencing indicator.

b. North Carolina Public School Teacher Mean Base Wage - $17,585

"A" Certificate	Grade 21 ——————>	Grade 27
	$1568/Mo.	$2153/Mo.
	$15,680/10 Mo.	$21,530/10 Mo.
"G" Certificate	Grade 23 ——————>	Grade 31
	$1715/Mo.	$2484/Mo.
	$17,150/10 Mo.	$24,840/10 Mo.

National Mean Base Wage - $20,715
North Carolina Ranks 37th Nationally
North Carolina Ranks 6th among Southeastern States

Source: Division of Certification and Standards, "1982-83 Public School Teacher Mean Bae Wage," North Carolina Department of Public Instruction, Raleigh, North Carolina.

8. Supply Information

. Average Annual Need for Replacement and/or New Positions: 10 new teachers - 6.5%.

. North Carolina Schools of Nursing Graduates:

Baccalaureate Programs	625
Diploma Programs	212
Associate Degree	930

Source: North Carolina Nurse Manpower Survey: 1982, North Carolina Area Health Education Centers Program, Chapel Hill, North Carolina.

. Frequent reasons given by registered nurses leaving employment to enter secondary Health Occupations Education:

-desire to teach.
-dislike of current job schedule.
-affords a career opportunity that complements child rearing.
-change of residence.

. Supply generally adequate in most geographical locations with the exception of large urban centers where numerous nursing employment opportunities exist with competitive wages.

9. Reflection of Quality of Staff: Indicators

a. Testing

. 100% of teacher candidates have successfully passed th North Carolina Nurses' Licensing Examination.

. 100% of employed teachers awarded an "A" or "G" certificate (bachelor and/or master's degree) have successfully passed the required "commons" segment of the National Teachers' Examination.

b. Selection

. 100% of teachers employed have had appropriate work experience (supervisory/teaching).

. 100% of teachers employed have had positive recommendations from previous employers.

c. Record

. No medical liability claim (teacher and student) has occurred in the history of secondary Health Occupations Education in North Carolina.

. No teacher liability claim has occurred in the history of secondary Health Occupations Education in North Carolina.

d. Student Record

. Refer to the 1983 Student Follow-up Record.

B. Staff Recommendations and Rationales

Issue 1

Labor Supply - Competitive Salary

Rationale

Salary improvements have been made to some degree regarding registered nurses in hospitals since the 1982 North Carolina Health Manpower Survey. However, loss of teachers to industry because salaries are not competitive is occurring across all disciplines. Recruitment of potential Health Occupations Education teacher candidates is becoming more difficult due, in part, to current educational salary scales and benefits. It is projected that program implementation and expansion is threatened by noncompetitive educational salaries and benefits.

Recommendation 1

The task force recommends that health industry salary scales and Health Occupations Education teacher salary scales be monitored regularly. The salaries and benefits should be competitive.

Issue 2

Quality of Staff - Certification

Rationale

Unambiguous research is not available to support ranking of preparation programs for Health Occupations Education; i.e., associate degree, diploma, bachelor's degree, master's degree. While all levels of registered nurse undergraduate educational preparation emphasize technical knowledge and skills, they do not integrate formal course work related to teaching skills. Moreover, all levels of undergraduate registered nurse educational preparation requires successful completion of the same licensing examination for entry into practice. It is important to note that the current career ladder model in public education fails to address the Health Occupations Educators without a bachelor's degree. Opportunity for career advancement is limited and it discriminates against effective teachers who do not hold a bachelor's degree at this time.

Recommendation 2

Trends in staffing Health Occupations Education programs should be monitored and the relations between on-the-job performance and different levels of educational preparation for registered nurses should be determined.

Recommendation 3

The task force encourages the State Board of Education to support the continued development and expansion of teacher education in Health Occupations Education, especially the effort initiated by North Carolina State University. All Health Occupations Education teacher candidates should be strongly encouraged to acquire bachelor degree status (Refer to 4b).

Recommendation 4

The current public education career ladder model must be articulated to include those Health Occupations Education teachers who do not hold a bachelor's degree.

Issue 3

Quality of Staff - Professional Development

Rationale:

Technology in the health industry is in a state of constant change and current registered nursing practice requires an individual to successfully complete a refresher course (a minimum of 60 hours) if nonactive for five years. Health Occupations Education teachers need to frequently upgrade nursing and allied health technical skills in order to stay abreast and to maintain curriculum relevance to the health industry.

Recommendation 5

All Health Occupations Education teachers should be employed for twelve months during which they return to the health industry to upgrade their technical skills in both nursing and allied health, based on an individualized personnel development plan: Total state funding and/or shared funding with health agencies in an industry-education exchange is recommended.

Issue 4

Quality of Staff - Certificate Renewal

Rationale

Changes in both educational and health industry trends require continuing education to keep abreast. Current statewide certificate renewal processes allow so much flexibility in course content that a questionable relationship between it and the teaching responsibility exists. There is a need for an approved and required individualized personnel development planning process.

Recommendation 6

The Health Occupations Education teacher's certificate renewal process should be relevant to the teaching task and technical area.

BIBLIOGRAPHY OF RESOURCES

Books

Fitz-Gibbon, Carol Taylor and Lynn Lyons Morris. HOW TO DESIGN A PROGRAM EVALUATION. Beverly Hills. Sage Publications. 1978.

Guba, Egon and Yvonna Lincoln. EFFECTIVE EVALUATION. Washington. Josey-Bass Publishers. 1981.

Lewis, James, Jr. LONG RANGE AND SHORT RANGE PLANNING FOR EDUCATIONAL ADMINISTRATORS. Boston. Allyn and Bacon, Inc. 1983.

McGuire, Christine and Richard Foley and Alan Gorr and Ronald Richards. HANDBOOK OF HEALTH PROFESSIONS EDUCATION. Washington. Jossey-Bass. 1983.

National Commission of Allied Health. THE FUTURE OF ALLIED HEALTH EDUCATION. Washington. Jossey-Bass. 1980.

Studies - Reports

CURRICULUM STUDY: SCIENCE: A REPORT FROM THE SCIENCE CURRICULUM STUDY COMMITTEE TO THE NORTH CAROLINA STATE BOARD OF EDUCATION. Raleigh. North Carolina Department of Public Instruction. 1982.

CURRICULUM STUDY: VOCATIONAL EDUCATION: A REPORT FROM THE VOCATIONAL EDUCATION CURRICULUM STUDY COMMITTEE TO THE NORTH CAROLINA STATE BOARD OF EDUCATION. Raleigh, North Carolina. North Carolina Department of Public Instruction. 1984.

HEALTH OCCUAPTIONS EDUCATION PROGRAM STANDARDS: ISSUES/CONCERNS: A SUMMATION OF SURVEY RESPONSES. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

JOB DESCRIPTIONS FOR SECONDARY HEALTH OCCUPATIONS EDUCATION STATE STAFF. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction.

1983 VOCATIONAL EDUCATION STUDENT FOLLOW-UP. Raleigh, North Carolina. North Carolina Research Coordinating Unit, Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

NORTH CAROLINA ACCOUNTABILITY REPORT FOR VOCATIONAL EDUCATION. Raleigh, North Carolina. Division of Vocational Education, North Carolina Department of Public Instruction. 1983.

NORTH CAROLINA ANNUAL PLAN FOR VOCATIONAL EDUCATION: 1984. Raleigh, North Carolina. Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

North Carolina Area Health Education Centers Program. NORTH CAROLINA NURSE MANPOWER STUDY: 1982. State Health Planning and Development Agency (DHHA: Grant #04-P-000270-0601).

NORTH CAROLINA SECONDARY HEALTH OCCUPATIONS EDUCATION: A TEN YEAR HISTORICAL ACCOUNT, 1971-1981. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1981.

NORTH CAROLINA SECONDARY VOCATIONAL EDUCATION 2000: A RESOURCE NOTEBOOK FOR ACTION PLANNING FOR THE FUTURE. Raleigh, North Carolina. Research Coordinating Unit, Division of Vocational Education, North Carolina Department of Public Instruction. January, 1982.

NORTH CAROLINA STATE PLAN FOR VOCATIONAL EDUCATION FIVE YEAR PLAN: 1983-1987. Raleigh, North Carolina. Division of Vocational Education, North Carolina Department of Public Instruction. 1983.

OCCUPATIONAL OUTLOOK HANDBOOK. Washington, D. C. U. S. Department of Labor. Bureau of Labor Statistics. 1984.

PROCEEDINGS OF A CONFERENCE ON TECHNOLOGY ASSESSMENT AND OCCUAPTIONAL EDUCATION IN THE FUTURE. Chicago, Illinois. Office of Occupational Planning. Bureau of Occupational and Adult Education. U. S. Office of Education. April, 1979.

Raynor, Nancy. HEALTH OCCUPATIONS EDUCATION TEACHER PROFILE: FACT SHEET. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

SECONDARY HEALTH OCCUPATIONS EDUCATION: A HIGH SCHOOL CAREER PREPARATION PROGRAM. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1982.

SECONDARY HEALTH OCCUPATIONS EDUCATION ANNUAL MANAGEMENT PLAN, 1984-1985. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

SECONDARY HEALTH OCCUPATIONS EDUCATION CURRICULUM MATERIALS ASSESSMENT: 1984. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1984.

SECONDARY HEALTH OCCUPATIONS EDUCATION FIVE YEAR PLAN: 1983-1987. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1983.

SECONDARY HEALTH OCCUPATIONS EDUCATION GUIDE FOR PROGRAM PLANNING AND MANAGEMENT. Raleigh, North Carolina. Health Occupations Education, Division of Vocational Education, North Carolina Department of Public Instruction. 1982.

TECHNOLOGIES OF THE '80s: THEIR IMPACT ON HEALTH OCCUPATIONS. Raleigh, North Carolina. Conserva, Inc. September, 1982.

Presentations

Raynor, Nancy. "Fact Sheet: Characteristics of the Health Occupations Education Teaching Staff." 1984.

Shurrer, Roger. "Quality Assurance Program and the Career Ladder Concept: Impact on Health Occupations Education." 1984.