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Preparing vocational teachers to effectively serve special needs students: An inservice education model

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PREPARING VOCATIONAL TEACHERS TO EFFECTIVELY SERVE SPECIAL NEEDS STUDENTS: AN INSERVICE EDUCATION MODEL

by

Debra Owens Parker

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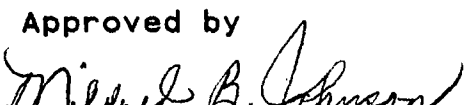

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APPROVAL PAGE

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The purpose of this study was to develop, implement and evaluate an inservice education model for home economics teachers in the areas of diagnoses, causes, intervention and remediation, instructional, and behavior management techniques for learning disabled, mentally handicapped, and behaviorally emotionally handicapped learners. The sample consisted of 14 middle and secondary level home economics teachers employed by the Wake County School System during the 1989-90 school year.

The model included (a) assessment interviews which were conducted with each teacher to identify teacher perceived needs, problems, and concerns; (b) a pre and post-assessment of the teachers' knowledge of handicapping conditions, instructional strategies, behavior management techniques, and attitudes toward mildly handicapped learners; (c) two full days of inservice training; and (d) follow up observations in the classrooms.

T-test, chi square, and the Duncan Multiple Range Test were used to analyze the data. The results of the analysis

revealed a significant increase between the pre and post-assessment of teachers' knowledge of LD, EMH, and BEH students in regard to (a) characteristics of learners, (b) instructional strategies sections, and (c) behavior management. The teachers consistently scored significantly higher on the characteristics and instructional strategies than on the section pertaining to behavior management. There was a significant increase in the teachers' perceived ability to teach mildly handicapped LD, EMH, and BEH students after the training. The teachers possessed a positive attitude toward the handicapped learner and mainstreaming before and after inservice training.

Consumer and homemaking courses were more frequently identified than occupational home economics courses as areas in which greatest assistance was needed. Foods and Nutrition, Clothing and Textiles, and Interpersonal Relationships were the three most frequently identified courses.

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Finally, I thank my family who provided the daily love and encouragement that made this an easier task.

DEDICATION

This dissertation is dedicated to my husband, Freddie, our son, Quinton, and my parents, Mr. and Mrs. Hughie Owens.

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CHAPTER I

INTRODUCTION

Public Law 94-142, The Education for all Handicapped Children Act (1975), states that all handicapped children should be provided a free appropriate public education in the least restrictive environment. It is composed of six basic principles which describe the education process for handicapped children and youth. They include: zero reject, nondiscriminatory evaluation, appropriate education, least restrictive environment, procedural due process, and parental participation.

The principle "zero reject" insures that each handicapped child must be provided with educational considerations, and "appropriate education" requires that the educational considerations be suitable to meet the needs of the individual (Brown, 1980; Kirk & Gallagher, 1983). Thus, the special needs of children have become the responsibility of all educational personnel. Implications of this law include but are not limited to mainstreaming, declaring that educational systems have a responsibility to

assist in the preparation of individuals responsible for meeting the special needs of children.

Handicapped students are required, by this act, to be placed in the "least restricted environment" and should be exposed to nonhandicapped students when possible. Mainstreaming is one means by which the educational needs of mildly handicapped children are met. Regular classroom teachers are therefore required to meet the special needs of these students when placed in the regular classroom setting. Educational systems are required to insure that regular classroom teachers are prepared to effectively serve all children including the handicapped. Such preparation includes diagnostic, intervention, remediation, communication, evaluation, and behavior management skills (Brown, 1980; Glass & Meckler, 1972).

Vocational education teachers are members of the educational team needed to assist handicapped students in developing to their full potential. Effective delivery of vocational education to handicapped students has received much attention in numerous litigations and legislation. Section 503 and 504 of the Rehabilitation Act of 1973, the

Education For All Handicapped Children Act of 1975 (P.L. 94-142), the Creech Bill No. 824, and the Education Amendments of 1976: Title II-Vocational Education are four legislative acts which provide for free and appropriate vocational education for all handicapped students (Greenan & Phelps, 1982).

Home economics teachers are faced with the challenge of educating handicapped students and preparing them to function as independently as possible in their everyday lives. This challenge includes preparing handicapped students to compete for and maintain jobs. The home economics curriculum is broad; and home economics teachers, as well as general teachers, need inservice education to effectively meet the changing needs of handicapped students. Thus, inservice education should be a continuous process in order to maintain competence in identifying handicapping conditions and in applying the most appropriate instructional strategies and techniques (Carri, 1985; Goodlad, 1984; Levinson & Capps, 1985; Sapon-Shevin, 1987; Sedlack & Sedlack, 1985).

The three handicapping conditions most commonly found in the regular classroom setting are Learning Disabled (LD), Educable Mentally Handicapped (EMH), and BehaviorallyEmotionally Handicapped (BEH) (Carri, 1985; Kirk & Gallagher, 1989; Mercer & Mercer, 1985; U.S. Department of Education, 1984; Webb, 1985). While current research suggests that all teachers, in all subject areas, need additional inservice education in the area of special education, emphasis is placed on the vocational teacher at the secondary level because of the increase in enrollment of youth with special learning needs and the need for these students to obtain vocational competence (Greenan & Phelps, 1982; Levinson & Capps, 1985; Yates, 1973).

Significance of the Study

There is a high correlation between inservice education and teacher attitude toward mainstreaming and the handicapped learner. Inservice education generally results in teachers who are better prepared to accommodate the needs of handicapped students and who possess a more positive attitude toward mainstreaming and consequently the

handicapped learner. Teachers who are knowledgeable and prepared to diagnose strengths and weaknesses, intervene with appropriate remediation techniques, modify curriculum materials, and implement behavior management techniques provide better service to both the handicapped and nonhandicapped learners (Alexander & Strain, 1978; Good & Brophy, 1972; Horne, 1979; Larrivee, 1981; Powers, 1983).

Cohen (1977) stated that teachers have not been adequately educated on how to prepare the mainstream to receive students who have special needs. Cohen further stated that it is essential that teachers receive inservice education through workshops and discussion groups to correctly identify the different levels of abilities and learning modalities so that the proper strategies and techniques are used to maximize student learning. It was also believed that workshops and discussion groups provided a greater sense of intimacy and would have the greater potential to affect change in cognitive and affective abilities in their classes.

Webb (1985) found that many home economics teachers felt inadequate in classroom planning when there existed a

range of abilities. One-third of the 279 home economics teachers surveyed had 20 years or more teaching experience and only 6 percent had less than five years of experience. The majority of the teachers, 53 percent, had received preparation for teaching special needs students through inservice workshops. Almost one-third of the teachers indicated that they had not received any preparation for teaching mildly handicapped students. Less than 25 percent of the teachers had taken one or more college courses that focused on handicapped students.

Although there are a variety of curriculum materials available, relatively few are geared toward the special needs population in home economics or toward explaining to home economics teachers how to modify and individualize instruction when an extensive range of abilities exists. In this study, a model was developed, implemented, and evaluated for the inservice education of home economics teachers in the areas of diagnoses, causes, intervention, remediation, and behavior management techniques in regard to the special needs population.

Statement of the Problem

Since the passing of specific legislation affecting the vocational instruction and related services to disadvantaged and handicapped students (Sections 503 and 504 of the Rehabilitation Act of 1973, P.L. 94-142, The Creech Bill, P.L.94-482, The Carl Perkins Act of 1984), school systems, teacher education programs, and state departments of instruction have attempted to implement the mandates of the legislation. The major purpose of this study was to develop, implement, and evaluate a model for inservice education of home economics teachers to better integrate special needs students into their classrooms. The specific objectives were to:

1. Develop a comprehensive education model to use with middle and secondary level home economics teachers.
2. Conduct interviews with home economics teachers to identify their perceived needs, concerns, and problems in serving the special needs population.
3. Determine the knowledge that home economics teachers possess about learning disabled,

behaviorally emotionally handicapped, and educable mentally handicapped students before and after inservice education.

4. Determine the attitudes of home economics teachers toward the integration of exceptional students in their classroom before and after inservice education.
5. Determine the attitudes of home economics teachers toward exceptional students in their classroom before and after inservice education.
6. Determine the attitudes of home economics teachers toward their ability to teach mildly handicapped LD, EMH, and BEH learners before and after inservice education.
7. Evaluate the effectiveness of the inservice education program.
8. Observe the participants in their regular classrooms, as they implement strategies and techniques gained from the inservice workshop.

Hypotheses

The following null hypotheses were formulated based on the statement of the problem:

H_1 There is no significant difference between teachers' knowledge of LD, EMH, and BEH students, before and after inservice education in regard to
(a) characteristics of learners
(b) instructional strategies
(c) behavior management/modification

H_2 There is no significant difference between teachers' attitudes before and after inservice education towards the integration of handicapped students into regular home economics classes.

H_3 There is no significant difference between teachers' attitudes before and after inservice education toward the academic potential of handicapped students to adjust in regular home economics classes.

H_4 There is no significant difference between teachers' attitudes before and after inservice education toward their ability to teach mildly handicapped LD and EMH students in regular home economics classes.

H_5 There is no significant difference between teachers' attitudes before and after inservice education toward their ability to teach mildly handicapped BEH students in regular home economics classes.

H_6 There are no significance differences among the means of the total score, and sub scores related to characteristics of learners, instructional strategies, and behavior management before and after inservice education.

LIMITATIONS

This study was limited to the middle and secondary level home economics teachers employed by the Wake County School system during the 1989-1990 academic school year. Another limitation was that the sample of 14 teachers volunteered to participate rather than being randomly selected. The small sample limited the extent to which the findings may be generalized to the larger population of home economics teachers.

DEFINITION OF TERMS

The following terms have been defined for the purpose of maintaining clarity and consistency within this study:

Exceptional child - one who deviates from the average or normal child in (a) mental characteristics, (b) sensory abilities, (c) neuromotor or physical characteristics, (d) social behavior, (e) communication abilities, or (f) multiple handicaps to the extent that the child requires a modification of school practices or special educational services to develop to maximum capacity. Exceptional children are also referred to, in this study, as special

needs. The special needs categories in this study are Learning Disabled (LD), Behaviorally Emotionally Handicapped (BEH), and Educable Mentally Handicapped (EMH) (Kirk & Gallagher, 1983).

Mentally handicapped - refers to significant subaverage intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period (Kirk & Gallagher, 1983).

Learning disabled - one who, after receiving instructional intervention in the regular educational setting, has a discrepancy between ability and achievement. The disability is manifested by substantial difficulties in the acquisition and use of listening comprehension, oral expression, written expression, reading, and or mathematics (North Carolina Rules Governing Children with Special Needs, 1985, in Lerner, 1985).

Behaviorally emotionally handicapped - one who after receiving specially designed educational support services and intervention strategies in the regular educational setting, still exhibits patterns of situationally inappropriate behavior of such frequency, duration, and

intensity to disrupt the student's own learning process (Defined by Eli Bowers for North Carolina Rules Governing Children with Special Needs, 1985).

Mainstreaming - the placement of handicapped students into educational programs with normal functioning students (Psychology of Exceptional Children, 1978).

Mildly handicapped - persons whose I.Q. falls approximately between 50 and 70 (Kirk & Gallagher, 1983).

Moderate retardation - persons whose I.Q. falls approximately between 30 and 49 (Kirk & Gallagher, 1983).

Severely handicapped - persons whose I.Q. falls approximately between 0 and 29 (Kirk & Gallagher, 1983).

Behavior modification - the technique involved in altering undesirable behavior to a more appropriate state (Psychology of Exceptional Children, 1978).

Modality - a way of acquiring sensation; visual, auditory, kinesthetic, olfactory, and tactile are the most common (Psychology of Exceptional Children, 1978).

Inservice education - a procedure for the improvement of instruction and for increasing competence and professional growth of employed personnel. Used

interchangeably, in this study, with teacher education (Tharpe, 1984, p.6).

Vocational teacher - an individual employed to teach consumer or occupational courses in the public school system (Tharpe, 1984, p.6).

Effectively serve - to plan, implement, and evaluate developmentally appropriate activities to promote academic, emotional, social, and physical growth.

CHAPTER II

REVIEW OF RELATED LITERATURE

The major purpose of this study was to develop, implement, and evaluate a model for educating home economics teachers to assess, identify, and diagnose the needs of handicapped learners in order to effectively plan and implement developmentally appropriate instructional modifications for handicapped learners. Few studies have been published on inservice training provided for vocational education teachers to effectively serve the special needs population and fewer studies focus on the education of home economics teachers in particular. A review of the literature revealed the major focus of inservice education to be for regular classroom teachers without identifying vocational education teachers as a single area of concern. However, the incidence of special needs students in vocational education classrooms has increased the attention given to the inservice preparation of vocational teachers to prepare the total learning environment to meet the special needs of students (Levinson

& Capps, 1985). The major goal of vocational education is to prepare the individual to function effectively and as independently as possible in life. Vocational teachers trained to assess the needs of the handicapped student are better prepared to structure the necessary support team to meet the vocational objectives.

Integrating handicapped students into vocational education programs has not been without problems. Funding and the education of the educational team are two of the problem areas facing vocational and special education administrators (Greenan & Phelps, 1982). Other barriers that prohibit the handicapped from fully participating in vocational education programs stem from within society, handicapped persons themselves, their families, special needs advocates, and educational systems.

Cohen (1977) stated that inservice and preservice preparation of teachers to effectively serve the handicapped student must focus on developing cognitive and affective skills. A comprehensive approach to teacher preparation tends to contribute to a more effective integrated program. The teachers' attitude toward

receiving and serving handicapped students in the regular educational setting tends to be more positive as the cognitive skills increased (Horne, 1979). In a similar effort, Glass and Meckler (1972) conducted a study designed to enhance teachers' ability to work effectively with mildly handicapped students in the regular classroom setting. Results indicated that inservice workshop presentations which provided information and additional support during contact experiences with special students, increased teachers' attitude toward exceptional students and their ability to serve students who exhibit special learning problems.

The literature reviewed for this study will be presented in three parts: (a) vocational education and special needs students, (b) models for inservice education of teachers, and (c) the effects of knowledge of handicapping conditions on attitudes toward exceptional children.

Vocational Education For Special Needs Students

Vocational education became a part of the general education curriculum in 1917 with the passage of the Smith

Hughes Act. Since its inception, it has frequently been perceived by many to be a 'dumping ground' for handicapped and disadvantaged students. The education rights movement, special education advocates, and federal and state legislation have done much to eliminate or minimize this negative image. Vocational education plays a definite role in the lives of all individuals, particularly the handicapped. Its major objective is to provide the necessary training to learn a skill, craft, or trade which allows the individual to compete for and maintain employment in the community. Such preparation would enable the individual to function as effectively and efficiently as possible in everyday life.

During the late 60s and early 70s, there was a surge of public interest in the number and scope of services provided for the handicapped and disadvantaged. However, few efforts were under way to expand the vocational programming options provided for the special needs population (Phelps, 1978; Tindall 1978). In 1974, the Olympus Research Corporation conducted a national assessment of vocational programs for the handicapped and

disadvantaged. The corporation found that, of the vocational programs surveyed, two-thirds of the training provided for handicapped persons was not designed to prepare the handicapped student with a skill or trade in order to compete for and maintain jobs. Another major finding was that 70 percent of the handicapped students enrolled in vocational education were placed in special classes.

The findings of the Olympus Research Corporation were supported when in 1975, the President's Committee on Employment for the handicapped examined the 1970 census and found that the non-institutional handicapped and disadvantaged population were overly represented among the unemployed and unskilled workers, the handicapped had lower earnings than the non-handicapped, and the handicapped represented one out of eleven persons living in this country (Phelps, 1978). It was also revealed that few vocational options were available to handicapped persons.

The educational rights movement supported by parents, educators, researchers, and advocates influenced the passing of Federal and State laws (Section 503 and 504 of

the Rehabilitation Act, 1973; The Education for All Handicapped Children Act of 1975, P.L.94-142; The Creech Bill; The Education Amendment Act of 1968; The Education Amendments of 1976:Title II, P.L.94-482; and The Carl Perkins Act of 1984) which mandated free, appropriate vocational instruction and related services to handicapped students in the regular educational setting whenever possible. Noncompliance with any of these laws resulted in the loss of federal funds. Such legislation made new areas of vocational education accessible to the handicapped thus expanding employment opportunities. Section 503 of the Rehabilitation Act Amendments of 1974, required that all contractors or subcontractors with the Federal government have an affirmative action plan for hiring handicapped workers. Section 504 of the Amendment was similar in nature, but assured that any qualified handicapped person would not be denied equal opportunity by agencies, persons, or employers who received Federal funds.

Public Law 94-142, The Education for All Handicapped Children Act of 1975, provided free appropriate education for all handicapped persons. This law also required that,

in its appropriateness, the handicapped students be exposed to the nonhandicapped students and all of the advantages afforded them whenever possible. The plan of action for the handicapped should be documented in an individual education plan (IEP) to be signed by the parent or legal guardian (Brown, 1980). Federal funding was withheld from school systems not adhering to these guidelines.

In 1968, Congress passed the Education Amendment Act stipulating that 25 percent of the federal funds provided for vocational education be used for the handicapped (10 percent) and the disadvantaged (15 percent). In more recent federal legislation, Public Law 94-482, the Education Amendments of 1976: Title II-Vocational Education, increased the allowance for special needs students to 30 percent and stated that 10 percent of the federal funds received by vocational education be used for the handicapped and 20 percent for the disadvantaged. It required, for the first time, that the state and local levels of the educational systems match the 30 percent received (Phelps, 1978; Hohensil & Warden; 1978). The Creech Bill No. 824, enacted by the North Carolina General

Assembly in 1977, did not provide monies for mainstreaming handicapped learners, but was the State's response in support of P.L. 94-142.

In October of 1984, The Carl Perkins Vocational Education Act was signed by the president in support of continued Federal assistance for vocational education through the year 1989. This Act became effective at the start of the 1985-86 school year and replaced the Vocational Education Act of 1963. There were two central themes of this Act. The first major theme was to make vocational education programs more accessible to special populations among which the handicapped is included. The second major theme was to "improve the quality of vocational education in order to give the Nation's work force the marketable skills needed to improve productivity and and promote economic growth" (Department of Education, 1985, p. 3626).

Guidelines for the distribution and use of Federal funds became more stringent as a result of this Act. Funds allotted for the disadvantaged and handicapped could be used only for the additional cost of mainstreaming. The

extent of such funds was what it cost for the additional support services and projects over and beyond what was permitted for regular vocational education services. The Carl Perkins Act provided a slight increase in the basic State grant funds for the disadvantaged from 20 percent to 22 percent. The allotment for the handicapped remained 10 percent.

Since the mid-1960s there have been substantial gains in the provisions made for the handicapped and disadvantaged. However, the placement and successful integration of handicapped learners into the mainstream of vocational education programs has met many barriers. These barriers tend to focus on attitudes and perceptions about handicapped learners and impede full integration. Phillips, Carmen, and Renzullo in Phelps (1978) have identified some common barriers to the full participation of the handicapped in vocational education programs. Society lacks the basic knowledge about handicapping conditions and their causes and contributing factors. They tend to focus on inabilities rather than abilities. Consequently they are reluctant to support those who are

different. Members of educational systems are products of this society. Lack of knowledge about the conditions results in lack of knowledge in assessing and planning a continuum of services to meet the needs of the handicapped. Program administrators, evaluators, and developers who have difficulty in cooperating, planning, and coordinating concepts related to the handicapped have difficulty in adequately preparing inservice and preservice development activities for teachers. Therefore, the teachers are unprepared to meet the special needs of students in the regular classroom.

Teachers who have not been prepared to serve the nonhandicapped and handicapped in the same learning environment tend to have a negative view of the handicapped, the "different" learner, and their ability to serve them. These perceptions are passed on to the handicapped learners who develop barriers within themselves (Good & Brophy, 1972). They develop a tendency to conform to the self fulfilling prophecy of inferior roles, lack of self understanding, and appreciation for their abilities.

Lassel, et al. in Phelps (1978) analyzed the barriers as "gatekeepers" of occupational training from handicapped persons. Examples of "gatekeepers" include special education personnel who do not want exceptional persons to become skilled and occupational educational personnel who will not accept exceptional learners in their classes. It also includes state education department management personnel who lack knowledge in how to manage special programs, employers who will not hire handicapped persons, and teachers who are not adequately prepared to design and implement vocational programs for the handicapped.

Tindall (1978) identified four stages in the process of deleting the barriers as (a) increase the awareness of individuals to the characteristics, needs, and abilities of the handicapped, (b) individuals must develop the philosophy that handicapped persons can and should be educated, (c) modify the educational programs to maximize the full potential of the handicapped learner, and (d) greater employment of handicapped persons and adapting jobs accordingly. Federal legislation has aided in this four stage process.

Current research efforts are geared toward breaking down the barriers. Greenan and Phelps (1982) surveyed directors of vocational education, directors of special education, and consultants responsible for vocational and related services for special students and identified eight policy related problems found in integrating handicapped persons into the mainstream. The eight identified problem areas, by frequency of expressed concern, included interagency cooperation and agreements, funding, service delivery and program options, need for personnel preparation to effectively serve handicapped students, state legislation, plans, and policies, federal legislation and regulations, attitudes of personnel, and program evaluation and improvement. As a result of these findings the researchers recommended that state agencies conduct similar studies to determine their major problems in delivering service to handicapped students, revise interagency agreements, develop teacher education programs, and develop new innovative programs, curriculum, and instructional materials. It was also advised that the identified problem areas be used as themes for workshop presentations.

In 1974, Hohenshil introduced the vocational school psychologist as a new innovative approach to assist in the successful integration of the handicapped into the vocational education classroom. Hohenshil and Warden (1978) maintained that although school psychologists have traditionally tested children for placement in special classes at the elementary level, the need for them at the secondary level was growing. It was further contended that the need for school psychologists in vocational education was even greater because they could bridge the link between vocational and special educators. In promoting this concept, it was believed that the school psychologist could provide the vocational teacher with the necessary assessment data based on all aspects of the student's functioning, evaluate the vocational curriculum in regard to the special needs students, provide inservice and preservice education for vocational teachers, and provide consultation services on behavior management techniques to be used with the handicapped and disadvantaged learner (Donohue, 1978).

In 1984, the United States Department of Education reported to Congress on the implications of 94-142. The findings of the report, focusing on vocational education for the handicapped, revealed that there was a growing trend to combine public and non-profit service agencies, human service agencies, and the private sector with the educational systems to provide occupational education and employment for the handicapped. The report also stated that the Education Department would expand transitional support from school to the work place through the development of curriculum materials, follow-up studies, the creation of workable interagency agreements, and foster better communication between the school and the business community.

Models for Inservice Education of Teachers

Less than 7 percent of all handicapped children are educated in special schools. Ninety-three percent are educated in the regular school, of which two-thirds are mainstreamed in the regular classroom with nonhandicapped students (U.S. Department of Education, 1984). Nearly

every state has federal and state legislation which mandate special vocational services for the handicapped learner in the mainstream of vocational programs. Yet research indicates that the regular (vocational) classroom teacher is unprepared to meet the special needs of these students (Meers & Conaway, 1978; Rude, 1978; Ryor, Shankeer, & Sandefur, 1979; Thurman, 1980). Teacher preparation efforts should focus on specific teaching skills found to be crucial in effective mainstreaming. National education reports on special education stated that teachers, for the most part, are ill prepared to provide corrective feedback, establish a positive classroom atmosphere, use efficient management strategies, state behavioral objectives to students, and establish supportive relationships with the students. Teachers should be strengthened in these areas (Pugach, 1987).

Redden (1976) surveyed elementary teachers teaching in the mainstream structure, in 24 schools in the Kentucky community, to determine what those teachers perceived as being the necessary competencies for effective mainstream teaching behavior. The teachers identified six major

categories of competencies necessary for effectively teaching in the mainstream structure. The six areas were, (a) developing orientation strategies for mainstream entry, (b) assessing the needs and goals of the handicapped learners, (c) planning teaching strategies and identifying resources, (d) implementing the teaching strategies and using the resources, (e) facilitating learning, and (f) evaluating the learning. These competencies are also necessary for effective mainstreaming on the middle and secondary levels.

Approximately 10 years later, in a similar study, Carri (1985) reported that special education teachers identified the same areas of skills as the most essential to effectively serve handicapped students. More specifically this study attempted to determine if the skills needed to teach learning disabled, behaviorally emotionally handicapped, and mentally handicapped students were similar or different. The results revealed that the skills needed to work effectively with the learning disabled and mentally handicapped students were similar and ranked similarly in importance while the skills needed for

the behaviorally emotionally handicapped were different than the others. Teachers of the behaviorally disordered were significantly concerned with assessment and evaluation, and professional information and not as concerned with curriculum design and use. One possible contributing factor is that teachers of the behaviorally disordered focus more on the social-emotional adjustment of children than on the academic component because their students may not experience academic difficulties. Teacher education programs are cautioned to base the content and depth of the content on the specific needs of the participants.

Haisley (1978) reported that the competencies needed for effective mainstreaming are the competencies needed for effective teaching in the nonmainstreamed structure. Research conducted by Stainback and Stainback (1984) supported this belief. Haisley (1978) further stated that good teachers have always used the skills needed to implement P.L. 94-142. In identifying these competencies, Haisley did not rank the skills needed, since ranking would depend on the goals and mission of a particular program or

institution, but did indicate that the majority of the skills were geared to elementary, middle, and secondary teachers.

First, teachers at all levels must all have a working knowledge about Federal legislation regarding educational policies in general and their program in particular. They should be able to define the policies and eventually elaborate on them and their implications. Next, these teachers should possess the ability to screen and refer students with special needs, assess learning difficulties, develop individualized educational plans (IEPs), determine eligibility for special services, and monitor student progress.

Levinson and Capps (1985) stated that over one million handicapped students in the United States lack the career and vocational skills necessary to compete for and maintain jobs. Therefore, vocational teachers, in addition to the aforementioned competencies, should have a workable knowledge base of child growth and development, an understanding of placement needs, a realistic assessment of students' skills, and be prepared to teach salable skills as well as general education skills (Weisgerber, 1978).

Redick (1986) supported the competencies identified by Levinson and Capps (1985) and emphasized the need for teachers to be competent to individualize instruction, sequence instruction through task analysis, and to be creative with teaching techniques. Redick (1986) conducted an evaluation of the home economics curriculum and found that although there were more materials available for mentally handicapped individuals than any other handicapping condition, there existed a strong need for curriculum guides. Therefore teachers need to be able to modify existing curriculum materials.

Methods by which these skills are presented and taught vary with the goals and objectives of the program or institution. Goodlad (1984) in Pugach and Sapon-Shevin (1987), advocated a combined effort of inservice and preservice education through a fifth year of teacher preparation. It was suggested that the extra year be devoted to clinical experience in teaching special needs students. Tindall (1978) recommended that vocational education for handicapped students become a part of the regular teacher certification program. However, teachers

have stated preferences for the kinds of inservice meetings which benefited them most. Zigarmi, Betz, and Jensen (1977) surveyed methods of inservice education preferred by teachers. They surveyed 1,239 teachers in the state of South Dakota and defined types of inservice education by its frequency and usefulness. The results revealed 21 different types of inservice activities in which teachers were involved over a 2 year period. Bulletins, newspapers, and brochures, followed by readings from professional journals, local faculty meetings and one-day regional workshops were found to be the most frequent but the least effective method of inservice. Sixty to eighty percent of the teachers were involved in these activities. The least frequent, but most effective activities, were observation of teachers in other schools, workshops carried out on a college campus, assistance from another teacher present in the classroom, and 2 week summer 'Current Trends' workshop involving experts in the field of special education being the most effective method of inservice. Approximately 4 to 20 percent were involved in these activities.

What teachers want in inservice education was further explained by Ngaiyaye and Hanley (1978) who surveyed 228 teachers who had been involved in a variety of inservice education programs and asked them to create the ideal inservice program. The results indicated that teachers preferred that the central office organize the meetings by similar grades, disciplines, or programs. They were more concerned with content than length of time but the greatest percentage indicated one-half day in length and wanted to be involved in the discussion rather than listen to a lecture presentation. Inservice conducted by consultants, university professors, supervisors, or resource persons was preferred. Forty-nine percent of the teachers wanted the content to focus on teaching techniques, 26 percent on classroom management, 12 percent on selected pupil needs, and 10 percent on testing and evaluation. Teachers wanted inservice education that was practical, that related to their particular needs, that offered concrete ideas, and provided discussions on "how to" rather than reciting theory.

An inservice needs assessment of 262 home economics educators conducted by Beavers and Charlson (1986) revealed that teachers perceived a need for instructional techniques and the identification, adaptation, and use of instructional materials. The type of inservice preferred was training held off campus, during the summer for 1 to 5 full days.

Boote (1976) examined inservice programs in the Philadelphia area and found that 25.8 hours were devoted to general education annually while special education inservice programs averaged 1.7 hours a year. Kupisch (1975) reported that teachers 30 years old and younger have more interest in inservice than persons over 30 and that the teachers of all ages indicated that university courses were the least desirable.

There has been significant research on the need for inservice education to educate teachers on the skills and competencies needed for effective mainstreaming. However, there has not been significant attention devoted to how inservice education for effective mainstreaming should be planned. Jones and Hayes (1980) researched the validity of

surveys conducted to assess teacher needs. It was found that inservice education needs as perceived by teachers may to some extent but not totally present an accurate assessment of their needs. The researchers in this study cautioned inservice program planners to formally assess the needs in addition to asking teachers to identify their perceived needs for professional development. It was further suggested that survey items identify symptoms rather than developmental activities preferred by the teachers.

There are many factors which contribute to effective inservice education. One major factor is clearly stating the objectives of the inservice education program. Hall, Benninga, and Clark (1983) stated that inservice education should focus on at least one of the following objectives: (a) to increase the knowledge base of the teacher, (b) to increase the quality or quantity of skills possessed by the teacher, or (c) to change the attitudes through meaningful experiences. Some general guidelines for planning inservice education are to focus the content on real needs, to make sure the content benefits both the group and the

individual, to make it practical and feasible, to have a commitment from the participants, to involve the participants in the learning process, and to evaluate the effectiveness of the inservice education (Anderson, 1976; Byrne, 1983; King, Hayes, & Newman, 1977; Mangieri & Kemper, 1983).

Commitment is the first ingredient of an effective staff development program (Rogus, 1983). Commitment is greatest when the participants are allowed to choose their own goals and when inservice is presented at the teachers' work site. Participant commitment to inservice is also greater when it occurs during school hours, when growth can be seen during the process, and when there are incentives to fully participate. Reduced teaching loads or time off work during work days are two examples of incentives to participate in inservice.

Powers (1983) examined factors present in successful inservice education and also identified practical guidelines for developing a model for inservice education. These guidelines supported those advocated by Anderson (1976) and King et al. (1977). In addition, to those

identified, he recommended a variety of activities to be more effective than a single activity and that peer teaching (teachers teaching each other) was a viable alternative (Glazzard, 1980). Joyce and Showers (1980) recommended implementing these guidelines by developing an inservice program which included theory, demonstration, practice, feedback, and classroom application. This recommendation was based on research which indicated that inservice education should address objectives pertaining to increasing the knowledge base, the acquisition of skills, and developing positive attitudes toward the concept or program being introduced. Change in attitudes is the most difficult objective to achieve.

Many existing models of inservice education focus on the experiential learning, i.e., learning by doing, approach to inservice education (Colemman in Wood & Thompson, 1980). Experiential learning, which originated with John Dewey, includes a limited orientation to the skill or concept to be developed but focuses mainly on participation activities performed in a real setting. One advantage to this model are the concrete experiences which

may be drawn upon rather than abstract ideas. One model, which has been a foundation to inservice education, is a teacher preparation model developed by Yates (1972) which utilizes the laboratory/experiential approach. Although this model was developed very early in the process of teacher preparation for mainstreaming, it remains one of the most effective approaches to inservice education today. Forty regular classroom teachers were used to test the effectiveness of this model by 30 serving as the experimental group and 10 as the control group. The control group received traditional lecture instruction while the experimental group received 3 hours of traditional lecture and 97 hours of laboratory/experiential instruction. The results yielded a significant difference in the learned knowledge and perceptions about the ability of handicapped students. The experimental group, who worked with the handicapped, had more positive perceptions and had acquired more knowledge about the handicapping conditions.

Another approach to inservice is the technical assistance model in which an expert provides a five-step

cycle of assistance in teaching a skill, concept, or strategy. Trohanis and Jackson (1980) identified two major roles in the model; the client as the person needing assistance and the program agent as the person providing the assistance. The five steps in the technical assistance process are:

Step 1: Examining the objectives - both participants must be aware of the overall goals and methods.

Step 2: Assessing the clients needs - identification of clients' perceived needs, concerns, and objectives.

Step 3: Preparing an agent-client agreement - a written agreement which outlines the areas of assistance, resources, method of delivery, schedules, expected developmental and academic results, and evaluation procedures.

Step 4: Coordinating and delivering assistance - the actual delivering of assistance.

Step 5: Evaluating the technical assistance and the developmental and academic results. Depending

on the results, the client may begin the cycle again.

The technical assistance model is an alternative to traditional inservice education models in that it provides for more individualization and for mutual planning throughout the technical assistance process (Trohanis & Jackson, 1980). This approach to inservice would be more costly due to the one-on-one assistance than the traditional approaches to inservice education which are geared toward groups of individuals.

Action research as a model for inservice education places emphasis on teachers developing inquiry skills necessary to state what they do, why they do what they do, and to see the effects of their actions on their teaching effectiveness. This model is similar to technical assistance with one added step, the acquisition and demonstration of skills take place in the classroom. Thus, on site experience coupled with theory is the key to the action research model. Oliver (1980) identified six stages of the action research model which include (a) teacher and supervisor identify the problems in the learning

environment (b) supervisor provides pertinent readings and materials for the participants, (c) the teachers study the materials and identify possible solutions to the problems and form a plan of action, (d) the teacher then goes into the classroom and implements the plan of action with the supervisor's assistance, (e) the supervisor provides ongoing review and support of performance and results, and (f) teacher and supervisor evaluate the plan's success and alternative suggestions are made.

The action research model is actually a collaborative effort between the teacher and supervisor in which the teachers pose the question, identify the problem(s), and test the solutions to the problems. The interactive model developed at the Far West Laboratory is an example of the action research model with one variation; the researcher works along with the supervisor and teacher (Tikunoff & Ward, 1979, in Oliver, 1980). The liaison model is also an example of a collaborative inservice program (Beck, 1982). It is similar to the action research model and the interactive model except the collaboration is between the

local education agency, an instructional resource center, and an institution of higher learning.

Another model for inservice education which requires the cooperation of different educational personnel housed in the same setting is the action plan approach to inservice education (Rocha & Sanford, 1985). In this model, the resource room teacher provides inservice education to regular teachers to assist them in identifying problems commonly associated with mainstreaming. Efforts are combined to solve and possibly prevent problems through an in-house mentor approach in the regular teachers' classroom setting. This method of inservice requires high commitment and a shared responsibility by all participants to develop materials and implement strategies.

In an attempt to avoid "one shot" inservice meetings and meetings after a long day of teaching, one school system implemented "brown bag seminars" as an approach to inservice education (Kaping & McKeag, 1983). The 30-40 minute seminar presentations with short question and answer periods at the end were held during the lunch period. This was convenient for teachers since there were no teaching

duties scheduled during this time of day. Teachers and school administrators were surveyed to identify needs, concerns, and problems to be presented. The topics discussed varied and school personnel, individuals from the community, and surrounding universities were used as resources. The short seminars presented often laid the foundation for more in-depth inservice programs when needed.

In a similar study, a group of administrators and teachers interested in planning short inservice sessions followed the suggested guidelines and surveyed the faculty to determine the topics to be covered (Dunaway, Mechenbier, Parsons, & Wright, 1987). The committee found the faculty to have little interest and enthusiasm for inservice education programs where experts spend a short amount of time and leave without follow-up activities or suggestions for follow-up activities. Thus the committee designed an inservice program which utilized the expertise of the faculty members. Volunteers were solicited to present mini inservice education sessions. This innovative technique was an incentive to faculty members to commit to an

inservice program. The underlying philosophy for this model was the belief that teachers would be more committed if they were presenting before an audience on a topic of real interest. The mini sessions in this model were also conducted during the 30 minute lunch period. The most frequent complaint about this model was the lack of time. The teachers' desire for longer training periods was viewed positively in that it demonstrated the teacher's enthusiasm for the technique.

The job embedded model is an approach to inservice education in which employed persons are trained in improving their performance. Shaw (1985) researched and evaluated the job embedded model for a school based inservice education program for special education support teams. It was stated that this model for inservice education was especially beneficial for an intact support team because the content of the inservice education could be geared toward the specific situations and circumstances to be encountered in a particular setting. The model included assessing the needs of the participants, initial activities for leadership personnel, collaboration in

decision making and sharing, and a demonstration of competence by inservice trainers.

Reinhartz and Beach (1987) presented a comprehensive supervision model for promoting professional development in which the primary responsibility of instructional supervisors is to assist teachers in improving classroom instruction. This model is based on the assumption that teachers are individuals who learn in different ways. Consequently, researchers need to possess a variety of strategies and supervisory techniques to reach the learners. The supervision approach to inservice has two major components: clinical supervision and developmental supervision.

Clinical supervision is referred to, in this model, as "supervision up close." It follows the cycle of pre-observation conference, classroom observation, data analysis, post observation conference, and follow-up. This style of supervision is frequently used in school systems to evaluate teacher performance. It is time consuming and may not be appropriate with every teacher, in every discipline, for every in-class observation.

Developmental supervision attempts to match teachers' level of abstract thinking with teachers' level of commitment toward inservice education. In the developmental supervision approach there are three supervisory styles: nondirective (minimum guidance), collaborative (some direction), and directive (maximum guidance) (Glickman, 1981, in Reinhartz & Beach, 1987). The teacher who is high in commitment and rates high in abstract thinking work best with the nondirective supervisory style. Teachers with high commitment but low levels of abstract thinking need a collaborative style while teachers with low commitment and high levels of abstract thinking also need the collaborative style of assistance. Teachers low in commitment and low in abstract thinking need the directive style of supervision. Although clinical and developmental supervision complement each other, they are seldom used at the same time. The developers of this model advocated using the strengths of both to develop a comprehensive plan of assistance.

Technology also has been used to assist in inservice teacher education programs. Dyck (1987) developed a

training model designed to prepare practicing teachers in rural areas to serve special needs students. The model incorporated the use of an interactive telecommunication network in which the teachers were linked with a university and had access to the university's resources which aided in problem solving. Other major components of the model consisted of independent study, field experience, and traditional on-campus summer courses.

Inservice education programs can be more valuable if properly planned and implemented using the guidelines suggested by research studies. An important step in the education process is follow-up. A well planned inservice program should consist of follow-up activities which allow for the expansion and on going evaluation of skills. Grossnickle (1987) stated that without an effective follow-up program, teachers may believe the inservice program has no long-term benefits. Suggested follow-up activities included: (a) provide a resource person for continued support, (b) provide release time for teachers to observe implementation of strategies and techniques by other teachers, schools and programs, and (c) a follow-up visit from the presenter at a prearranged time.

Knowledge Of Handicapping Conditions And Attitudes Toward Exceptional Children

Research on effective teaching behavior and inservice education both emphasized the importance of a positive teacher attitude toward the mainstreaming process for successful mainstreaming to take place (Jordan & Proctor, 1972; Knoff, 1985). Cohen (1977) stated that before handicapped children can successfully be integrated into the mainstream, teachers must prepare the mainstream itself. According to Cohen, this means developing a positive attitude in order to receive the handicapped learner. The courts, advocate groups, and parents have been pushing for mainstreaming. Yet the preparation of the mainstream has received little attention. There must be a change in both cognitive and affective skills. It is believed that formal courses do little to change the affective skills of teachers while conferences, workshops, and discussion groups have the greatest affect.

Carpenter (1978) conducted one of the few studies which focused on the effects of attitudes and perceptions toward mainstreaming in home economics classes. This study

was concerned with the attitudes of home economics teachers toward the integration of the mildly handicapped into the vocational home economics classroom. A random sample of 38 state supervisors, 52 teacher educators, and 120 home economics teachers completed a questionnaire designed to measure knowledge and attitude. The amount of mainstreaming experience varied among the three groups of educational personnel. The state supervisors and teacher educators had far more inservice on the handicapped than did the teachers. However, the teachers possessed a more favorable attitude toward the process of mainstreaming and its implications than did the state supervisors and teacher educators. Carpenter recommended more preservice instruction on the part of the colleges and universities concerning mainstreaming, placement of student teachers in situations and or centers specifically designed to gain hands on experience in working with the handicapped, more inservice education for all educational personnel, and the development of a model for linking special education programs with home economics. These findings and recommendations were supported by Goodlad (1984).

In a study conducted by Webb (1985), in which 279 home economics teachers were surveyed at a state wide summer conference, a significant relationship between difference in teachers' attitudes when compared by race and knowledge of special learners and their attitude toward their integration into the regular classroom was revealed. Black teachers were more positive about mainstreaming than other races and those with more knowledge held a more positive attitude. There also existed a significant relationship between teachers' educational level and attitude toward mainstreaming. The higher the educational level the more positive the attitude toward the integration of the handicapped. The teachers were given a tolerance scale inventory which revealed that teachers who were most tolerant had the most positive attitudes.

Moore and Fine (1978) conducted a study of teacher attitudes toward mainstreaming by comparing the attitude of special and regular teachers. Sixty-one teachers of learning disabled, educable mentally handicapped, and normal students were asked to complete an interpersonal checklist describing the characteristics of a typical 10-

year-old male found in each of the three categories. They were also asked to complete a 15 item questionnaire on attitude toward mainstreaming. Moore and Fine found that the teachers, on a whole, viewed each of the male subjects differently. The teachers believed the educable mentally handicapped student had poorer interpersonal skills than the learning disabled and the normal student. They also viewed the process of mainstreaming differently. The special teachers were more positive and accepting of the integration of handicapped students into the regular classroom than were the regular classroom teachers.

One possible contributing factor for this difference, as cited in a study conducted by Harasymiw and Horne (1976), is that the more knowledge one possess about a concept, situation, or set of circumstances, the less fearful one becomes of the situation. Teachers who had experience working with handicapped individuals tend to be more accepting of them in the regular classroom setting than those who had no experience. Harasymiw and Horne identified 191 teachers from schools where handicapped children were integrated into the regular classroom and 161

teachers from schools where handicapped students were not integrated into the regular classroom. There were no significant differences in the demographic data of the teachers between the two categories. The results of the 52 item Likert scale questionnaire revealed that the teachers with integration experience held more positive attitudes toward the handicapped learners, toward their abilities to serve the handicapped learner, and in the handicapped student's ability to achieve academically in the regular classroom setting. These teachers were also more confident in their ability to manage special students than the nonexperienced teachers.

Jordan and Proctor (1972) investigated the attitudes of teachers toward mainstreaming and the handicapped learner. It was revealed that teachers who spent full-time with handicapped children held more positive attitudes than the part-time teachers or those who spent no time with the handicapped. It was also stated that attitudes toward an object, person, or process are dependent upon the extent and quality of knowledge and experience possessed about the

object, person, or process. Therefore, increased knowledge alone may not affect a significant change in attitude.

Inservice education has often been used to increase the knowledge about handicapping conditions with the expectation of improving the attitude toward mainstreaming. Fiorentino (1978) examined the effectiveness of short-term inservice on improving attitudes toward and knowledge of handicapping conditions. Forty-six regular classroom teachers participated in four two and one-half hour sessions over a 2 month period. The inservice was held on site in a public school building. The content focused on a definition of mainstreaming and its advantages and disadvantages, major issues and concerns surrounding the mainstreaming process, characteristics of handicapping conditions, and individual differences, and alternatives to labels for effective instructional planning. Discussion groups and films were the main modes of delivery. The results indicated that the participants of the short term inservice program had a more positive attitude toward mainstreaming and handicapped learners than before the education. The teachers were better prepared to

determine appropriate placement for the special needs learner. There were no significant differences in the demographic data including the amount of teaching experience.

Shotel, Iano, and McGettigan (1972) surveyed regular classroom teachers in six elementary schools in Philadelphia to determine the effect mainstreaming had on attitude in regard to the teachers' attitude toward mainstreaming the handicapped, the teachers' ability to teach the handicapped in the mainstream, the handicapped student's ability to adjust socially and emotionally, and the handicapped student's ability to achieve academically as the nonhandicapped student. The teachers were divided into an experimental group which consisted of teachers participating in an integrated resource room program and a control group of teachers who had self-contained classes. The survey was conducted at the beginning and end of the academic school year. Of 128 teachers surveyed, approximately 115 teachers responded to the questionnaire. The results indicated that the majority of the teachers' attitudes changed very little, if any, toward the

integration of the learning disabled and the educable handicapped. There was moderate effect on the attitude toward the integration of emotionally handicapped learners. The researchers recommended that future inservice programs include methods and techniques for working with the handicapped and also provide teachers the opportunity to observe and participate in the resource rooms.

Twelve years after the passing of P.L. 94-142, Gans (1987) studied the willingness of special and regular teachers to teach handicapped students. The major question under investigation was whether or not there were differences in the demographics and the attitudinal profiles of the two groups of teachers. An attitudinal questionnaire was mailed 128 regular teachers and 133 special teachers in 21 school districts. The items addressed areas of confidence to instruct, effect of integration on the classroom, time, and issues concerning appropriate placement. Both groups represented teachers of all grade levels, school categories, curricular areas, and both genders. The special education teachers represented

all disability areas. The regular education teachers' willingness to teach handicapped students was affected by career and nonaffective characteristics. Special education teachers were affected more by support services and factors pertaining to the learning process. Willingness to teach was not affected by personal confidence in their ability to teach. The number of different disabilities the teacher was willing to approach was a better predictor than how strongly the teacher felt about the handicapping condition.

Larrivee (1981) conducted a study to determine whether degrees of inservice would affect the regular teachers' attitude toward mainstreaming. The three degrees of inservice were (a) a random sample receiving no training, (b) a group attending monthly inservice education programs, and (c) a group receiving intensive training over a period of one year. The basis for this study was the belief that teachers' attitudes have a significant affect on special needs students and that teachers' attitudes are affected by factors such as amount and level of knowledge, specific skill acquisition, and the degree of contact the teacher has with exceptional children. Inservice training for the

moderate and intense groups focused on behavior management, prescriptive teaching, individualized instruction, and teaching-learning styles. The intense training group participated in a 6 week summer training program, weekly seminars, regular classes and visitation to the classrooms. The moderate group received less intense instruction. Significant differences were found between the intense group and the randomly selected group and the intense group and the moderate group.

Several studies have been conducted on the impact of inservice education on teachers' attitudes toward mainstreaming. The results have indicated significant changes, moderate change, and little if any change. The variability in the results indicates the need for additional studies and the need to identify definite variables which affect teachers' attitudes on mainstreaming. The instrument used to measure teachers' attitudes toward mainstreaming should be formally validated (Berryman & Neal, 1980; Berryman, Neal, & Robinson, 1980).

Development of Model

The model developed in this study was designed to increase the quantity and quality of skills possessed by middle school and high school home economics teachers to better serve mildly handicapped students. It included four components: needs assessment, instruction, evaluation, and follow-up.

Federal and state laws governing the full integration of handicapped students into the regular vocational classroom provided the foundation and supported the legal need for such a model to be developed. The two major themes of the Carl Perkins Vocational Act of 1984 were to make vocational education programs accessible to all persons, including the handicapped, and to improve the quality of vocational education programs. The inservice education model for this study was designed to reflect these two themes by attempting to increase the quantity and quality of teaching skills of the teachers thus making the teacher better prepared to plan and implement vocational programs for mildly handicapped learners.

The type of inservice format developed was based on the findings of Ngaiyaye and Hanley (1978) in that the inservice education was organized by the researcher and the central office personnel of the Wake county school system; the formal instruction and the follow-up addressed the competencies, skills, and needs identified by the teachers; the inservice was conducted by resource persons and experts in the field of special education; and the teachers were actively involved in the discussion rather than listening to a lecture. The instruction sessions were designed to present strategies and techniques that were practical and concrete, and provided the teachers the opportunity to practice the skill or concept.

The models of inservice education programs and the recommended guidelines that were described in the literature review, provided examples of staff development planning processes which have been effective in the past. Much of the literature addressed the need to identify what the teachers already knew, what they did not know, and what they hoped to learn. In previous studies, the teachers assisted in the identification of goals and objectives that

addressed their particular needs. Jones and Hayes (1980) found that teachers may not always give a complete and accurate assessment of their needs. To address this concern, the needs assessment phase of this model included both open-ended interviews and a pretest administered by the researcher. The results obtained from the needs assessment phase of the model are to be used to identify the skills needed by the teachers to become more effective in working with special needs students. Based on the results of the studies presented in the review of literature, a tentative outline of major skills to be taught was developed. These skills included an awareness of the characteristics of exceptional learners, the ability to teach to different learning styles, the ability to teach different learners in the same setting, and the ability to modify curriculum materials. The needs assessment data, collected through the open-ended interviews, are to be used to finalize the outline for the instruction phase of this model and to identify the skills to be observed in the follow-up. The open-ended interview as a form of needs

assessment was contributed by the researcher and not used in other studies presented in the literature review.

The evaluation component of the model was designed to determine whether a change in the level of knowledge and attitudes had occurred following the instruction. It was also used to determine the effectiveness of the instruction.

Harasyniw and Horne (1976) found that increased knowledge about and experience with exceptional children resulted in a more positive attitude toward handicapped learners, toward one's ability to serve them, and toward the handicapped learner's ability to function effectively in the mainstream. Based on these findings, attitudinal items were included on the pre and posttest developed for this study to assess the participant's attitudes before and after the inservice.

Follow-up activities have been found to be especially helpful to teachers in mastering skills and in positively increasing the teachers' attitudes toward mildly handicapped students. A significant positive increase in performance was observed in the teachers when the model

included instruction in the laboratory setting. The laboratory/experiential model, the technical assistance model, the action research model, the job embedded model, and the clinical supervision model all used some form of laboratory experience or follow-up activities, resulting in significant positive results. Therefore, the last phase of the inservice education model developed for use in this study, included follow-up which provided additional support during contact experiences with special students to allow for the learning, transferring, and evaluation of skills. Participation observation in which the researcher was actively involved was used as the follow-up activity in this study.

CHAPTER III

METHODS AND PROCEDURES

This study was designed to develop, implement, and evaluate an inservice education model for home economics teachers in the areas of diagnoses, causes, intervention and remediation, instructional techniques, and behavior management techniques for learning disabled, mentally handicapped, and behaviorally emotionally handicapped learners. A descriptive study using open-ended interviews, questionnaires, and participation observation approaches were used in this study.

Selection of Sample

The accessible population consisted of 52 home economics teachers employed by the Wake County Board of Education during the 1989-90 academic school year. At a bimonthly meeting for home economics teachers, all of the teachers were presented with the opportunity to participate in a workshop designed to prepare them to work more effectively with special needs students (see Appendix A).

Participation was voluntary yet strongly encouraged by the home economics program specialist due to prior expressed need by the teachers. A total of 17 teachers responded to the invitation to participate in the workshop; however 14 teachers actually participated. The 14 teachers represented 10 of the 27 schools in Wake County that offered home economics programs. The teachers received 1.8 certificate renewal credits. Certified home economists received 12 professional development units for their participation in the inservice education.

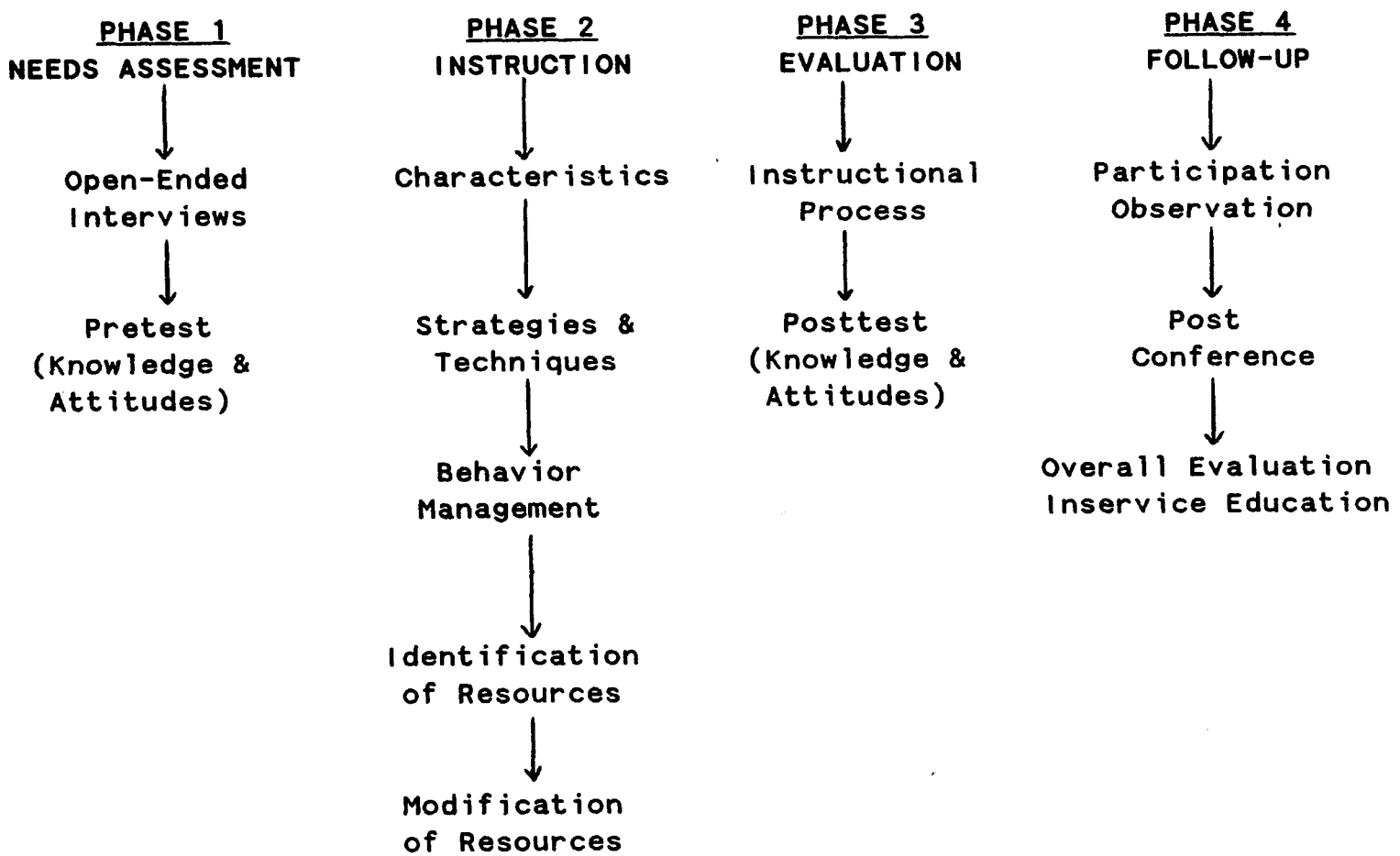
Procedures

The inservice education model, developed by the researcher, consisted of four phases: (a) needs assessment, (b) instruction, (c) evaluation, and (d) follow-up as shown in Figure 1. The instrumentation and data collection are discussed by phases. The procedures for data analysis are presented at the end of the discussion.

Phase 1 - Needs Assessment

This phase of the model consisted of two forms of needs assessment; the open-ended interview and the

Figure 1. Inservice Education Model



pretest. An open-ended personal interview was conducted with each teacher during the first semester of the 1989-90 school year. The major purposes of the assessment interview were to allow the teachers to share their experience of teaching mildly handicapped students in the regular home economics classroom setting; to gain an understanding of the teachers' experiences that could not have been perceived through a paper and pencil exchange; to identify the needs, problems, and concerns of the teacher as perceived by the teachers and researcher; to allow the teachers to state specific professional and personal goals for the inservice; and to establish teacher commitment for the inservice education. The interview process was one of introspection and reflection on the part of the teachers. An interview questionnaire was prepared to provide direction to the conversation. (See Appendix B for the interview questionnaire.)

The date, place, and time of the interviews were mutually agreed upon by the teacher and researcher. All of the interviews were conducted at the school site during the lunch and or planning periods. The interviews were tape

recorded or hand written as permitted by the teachers. Some of the teachers preferred their comments not to be taped. The process used to analyze the data was to draw central themes from the conversations conducted with the teachers. The data collected from the interviews were used to identify central issues, problems, and concerns to be incorporated into the outline for the formal instruction sessions.

The pretest was administered at the beginning of the first instruction session and was used as a baseline for measuring change in teacher performance after the inservice. The instrument used in the pretest was comprised of three parts (Appendix C). Part I included five items which addressed demographic data. The teachers were asked to rank items 1, 3, and 4 with 1 representing the most frequent and 5 representing the least frequent. An "X" was placed beside the most appropriate answer for items 2 and 5.

Part II consisted of 35 multiple choice items extracted from Educating Exceptional Children Test Bank Items. These items were selected because they directly

related to the concepts to be presented in the instruction phase, they were situational items and not simply recall items, and they focused on competencies all teachers should possess in working with special needs students (Kirk & Gallagher, 1989). Six items addressed general knowledge of handicapping conditions. Ten statements focused on teachers' knowledge of characteristics about mildly handicapped students. There were 13 statements that addressed instructional strategies and 6 statements focused on behavior management techniques. The multiple choice items with which the teachers had difficulty were identified and focused on during the instruction sessions.

Part III of the instrument included eight Likert-type items which assessed teachers' attitude toward mainstreaming, the handicapped learner, and teacher perceived ability to teach mildly handicapped students. Six of the attitudinal items were selected from an attitudinal survey developed by Larrivee (1981). Two items assessed teacher perceived ability to teach LD, EMH, and BEH students. The instrument was pilot tested with middle and secondary level home economics teachers in Durham

County for clarity of content and ease of administration. As a result of the pilot test, two items were slightly modified for easier comprehension. The reliability coefficient for Larrivee's original scale of eight items, as determined by Spearman-Brown, was found to be .92. Content validity was established through the review of the instrument by three experts in the field of special education. Approximately 15-20 minutes were allotted to complete the pretest.

Phase 2 - Instruction

The formal instruction sessions were conducted for six hours on two consecutive Saturdays, January 27 and February 3. Due to some overlap in the three handicapping conditions, each session of the formal instruction addressed all three conditions, while identifying similarities and differences. The first session focused on learning modalities; characteristics of LD, EMH, BEH learners; causes and contributing factors; behavior management techniques; test taking skills; and how LD, EMH. and BEH learners acquire, retain, and transfer knowledge.

This session was conducted by a special education teacher educator from a local university.

The morning session for the second part of the workshop focused on appropriate instructional strategies, how to individualize instruction, and how to reduce the readability level of course materials. This session was conducted by a high school special education teacher and a vocational resource teacher, both from Harnett county. The afternoon session was conducted by the researcher; a former secondary level home economics teacher, vocational resource teacher certified in mildly disadvantaged and handicapped education, and presently a teacher educator. This session focused on modifying the curriculum, identifying resources, and adapting resources to meet the needs of each mildly handicapping condition. (See Appendix D for the format of the instruction sessions and outline of concepts covered.)

A variety of approaches and activities were used to present, demonstrate, and practice the strategies and techniques which included small groups, large groups, lecture, visuals aids, tape recordings, demonstration, handouts, diagrams, problem-solving, critical analysis of

situations, and peer coaching. The teachers received materials throughout the first instruction session which further explained the concepts that were presented. They were encouraged to study the material and to note questions and comments for discussion at the next instruction session. The workshops were video taped and a copy left with the Wake county home economics program specialist for future viewing by all home economics teachers in the county. The formal sessions of the model included:

I. Learning and Behavioral Characteristics

A. Learning Modalities

B. Characteristics of LD, EMH, BEH Learners

C. Causes and/or Contributing Factors

D. Behavior Management Techniques

1. Specific Behaviors

2. Developing Social Skills

3. Basic Management Techniques

4. Behavior Modification

E. Test Taking Skills

II. Instructional Strategies

A. Methods and Procedures

1. Acquisition of Knowledge

2. Retention of Knowledge

3. Transfer of Knowledge

B. Individualizing Instruction

C. Selecting/Adapting Home Economics Materials and Resources

1. Modifying the Curriculum

2. Identifying and Adapting Resources

Phase 3 - Evaluation

Phase 3 of the model consisted of the posttest and the teachers' evaluation of the instruction sessions. The posttest was the same as the pretest and was administered at the end of the last instruction session. Approximately 15-20 minutes were allotted to complete the posttest. The posttest was given to compare the total scores and subscores of the pretest with the total scores and subscores of the posttest in order to test for significant differences before and after the formal instruction.

The participants' evaluation of the inservice education was used to determine the effectiveness of the inservice education model as implemented. The teachers

completed a written evaluation at the end of the posttest. The evaluation form used by the Wake County School System was used to evaluate the formal instruction and took approximately 5-7 minutes to complete. There were 16 items that were evaluated on a Likert scale of strongly agree, agree, undecided, disagree, and strongly disagree. (See Appendix E for an example of the evaluation form.) A comparison was made of the items missed on the pretest and also missed on the posttest to determine continued areas of difficulty.

Phase 4 - Follow-up

The follow-up observation consisted of classroom observations of workshop participants utilizing skills presented during the formal instruction sessions. A minimum of two classes were observed. The number of classes observed beyond the two classes varied according to each teachers' schedule and request for observation. Two teachers requested that the observer remain for another class period. The researcher used the participant observation approach to provide support, guidance, and suggestions for the expansion of skills. (See Appendix F

for a list of the cognitive and affective skills observed and enhanced during the follow-up observations.) Through participant observation, the observer was introduced to the class and was actively involved in the situations being observed. The degree of involvement varied from overt to covert depending on the nature of the lesson being taught. The observer was permitted to move freely around the room interacting and assisting students as appropriate.

The formative observation data instrument was used to record the teacher's and classroom activities. This instrument allowed for a wide lens approach to the observation which focused on generic functions of teaching to be used with all students. This instrument was selected because the teachers were familiar with the instrument in that it is used by the Wake county school system in teacher evaluations. It was also selected because it applied to handicapped and nonhandicapped students. Thus the teacher could use it for self evaluation for any group of students. (Appendix G).

A post conference was conducted with each teacher immediately following the classroom observation(s). The

teacher and researcher reflected on the techniques and strategies used to present the lesson. The teachers explained why particular strategies and techniques were used and others were not used. The teacher and researcher used the checklist of skills provided in the instruction sessions to identify the skills demonstrated by the teachers during the observations. Strengths and weaknesses were identified and discussed. Alternative techniques were suggested and demonstrated by the researcher when appropriate. The teachers explained how the lesson could be modified for future use.

During the process of introspection and reflection, the teachers were asked to evaluate the effectiveness of the inservice education model as stated in item 16 of the evaluation form in Appendix E. The evaluation was based on a scale of 1-5 with 1 representing the lowest and 5 representing the highest possible score.

Data Collection

Descriptive statistical analysis of the pre and posttest was used to summarize the data and to determine

the extent of the participants' cognitive and affective abilities before and after the workshop. The two-tailed *t*-test for pairs, chi square, and the Duncan Multiple Range Test were used to test for relationships. A .05 level of significance was used in the analysis of relationships throughout the study.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to develop, implement, and evaluate a model designed to assist vocational teachers in more effectively serving special needs students in the regular classroom. The accessible population was 52 home economics teachers employed by the Wake County Board of Education. The sample consisted of 14 of those home economics teachers who agreed to participate in the study. In order to facilitate the presentation of the results, data were analyzed and presented according to the stages of the model:

1. A discussion of (a) the central themes of the interviews and (b) demographic description of the teachers.
2. Test of hypotheses.
3. A discussion of the evaluation of the inservice education model.
4. A discussion of the follow-up observations.

Assessment Interviews

Thirteen of the interviews were between 50 minutes to an hour and a half and were conducted during the teachers' planning period at the school site. Three teachers continued the interview through the following lunch period. The one other interview lasted for approximately 20 minutes. This teacher gave one word responses with very little if any explanation.

The teachers appeared a little uneasy at the start of the interview. Two teachers acknowledged this and explained that it was because they had never experienced an interview before participating in a workshop. Each conversation was started by telling the teacher of personal experiences as a new teacher having no formal preparation for working with special needs children in the regular home economics classroom. I also expressed my concern for other teachers required to perform in this capacity but who also had little if any preparation. As I shared my experiences, the teachers began to nod with understanding. It was as though I was describing their experience with teaching special needs students. It was usually at this point in

the conversation that the teachers began portraying attending skills such as leaning forward, smiling, nodding in agreement, and crossing their legs in my direction. It is believed that by sharing my experiences and my view of what was involved in teaching, the channels of communication were opened. The conversations were generally relaxed and inviting. The teachers were encouraged to speak freely and were permitted to bring closure to the interview in an effort to hear all that they wanted to say. The length of time used to respond to questions and comments were interpreted to mean (a) I need someone to listen to me, (b) I need to ventilate, (c) I have so much to say, and (d) no one has talked with me like this before.

The teachers were asked how long they had been teaching, whether they enjoyed teaching, and what it meant to be a home economics teacher. Some of the responses to the latter questions were as follows:

> I've always wanted to be a home economics teacher. But nobody told me how hard it would be to be pulled so many different ways in one classroom.

> Lord, I wake up some mornings and I can't wait to get to school. Other mornings, I wonder if this is the day for me to change my profession. But I know that I wouldn't give it up for anything.
>
> I love my children. The extra responsibilities I can do without. But the children are mine!
>
> Teaching means caring, excitement, enthusiasm. It allows me to experience the joy of learning the same concept again and again through the eyes of different students. I just don't know how to reach some of them.

Some interpretations of these comments were: there existed a strong commitment to the profession and the students, the teachers felt much pressure involved with teaching, and there existed a genuine willingness to help all students achieve mixed with confusion on how to help everyone.

After the fifth teacher interview, it appeared that the discussions revolved around three major areas: a willingness to learn how to teach children with special needs, feelings of inadequacy, and a lack of resources. The central themes regarding their willingness to learn what to do was the belief that all children have a right to learn and it is the teachers' responsibility to try to reach all of his/her students. Approximately three-fourths

of the teachers identified the willingness to teach special needs students as their greatest strength in working with this student population. Some of the explicit statements were:

> I have tried a lot of different things with these students. Some I reach and some I just don't. For me it's a matter of trial and error. Everything doesn't work for everyone the same way, but I keep trying.

One teacher who had never taught students identified as handicapped and who for the first time was given a self-contained classroom this semester said,

> I've never been around these kinds of students before. I don't know if I can do it. Teach them I mean. I'll do what I can...I can't help but do what I can for all my students. But I (pause) don't know. Let's just hope we all survive.

Another teacher said,

> I simply do what I do for everyone. I'm not sure if the experts would say that I'm right and I know that I could do better. It will be interesting to see if I have been doing the right kinds of things with them.

These teachers, like the others in very similar comments, gave mixed messages. Their willingness to work

with handicapped students was felt to be sincere but their statements contained a theme of fear--fear of the student who was different. There was a fear of students who exhibited all of the characteristics for which the teachers had no formal training and, in many cases no experience to handle. Although they were concerned and cared for handicapped students, they would use phrases such as "these kinds of students", "them", and "these students" as stated in the explicit comments. One teacher who knew nothing of the characteristics of BEH students said that when asked to take a BEH student into her classroom, she told them that the just did not think that she could handle it. It is believed that much of her response was based on fear of not knowing about this population and the fact that he carried a label--BEH.

The second major area of discussion was feelings of inadequacy. The central themes were: (a) inability to diagnose the strengths and weaknesses of students, (b) uncertainty about how to individualize instruction, (c) inability to modify the curriculum, (d) inability to modify the existing materials and resources, (e) lack of

general knowledge about special needs students, (f) not knowing which instructional strategies were appropriate and when to use each, and (g) unfamiliarity with behavior management techniques most suitable for each handicapping condition. The teachers were quite comfortable in stating that they simply did not know what to do and that these were their most critical weaknesses in working with this population.

A middle school teacher expressed these concerns with much condemnation for the system which would put handicapped students in her classroom without preparing her first or finding out if she was prepared to teach them. Her comments were, "... and they don't care! They just give them to you and basically close the door." There were other comments which followed this vein but were not as strongly stated. There existed an undertone of anger; anger for a system which appeared, to this teacher, not to really care.

There was also a theme of fear. This time the fear was not of the students but a fear of failure. This school system was involved in the Career Ladder Pilot Program and

the teachers were evaluated several times during the year. It was stated by one teacher,

> ...I do what I can even though I've been observed during that class period. I know that my evaluations will probably be low. But what can I do? We can't determine the class to be observed...

This was a concern for at least one-half of the teachers because the evaluations affected merit increases.

Another theme was the uncertainty about whether mainstreaming was beneficial for the special needs students or the regular students. Many of these teachers were aware of the legal rights for these students to be in the regular home economics program and seemed to have mixed feelings about whether it would be a positive experience for everyone. One teacher said,

> When I came through my methods course, and that was nearly 15 years ago, this mainstream thing was just coming out. My college teacher mentioned it but that was all. Even she didn't think that it would materialize.

The last theme regarding inadequacy focused on their perceived lack of information about and inability to implement appropriate behavior management techniques. Here

again there was a theme of fear. This was a fear of how the student would respond if the student did not like the tone of voice used with him or her. It was a fear of how to communicate with special needs students, especially the BEH students. One teacher stated, "I have the same rules for everyone. I try each person on his own terms. But I don't take any mess from any of them. I am not going to get into an argument with them, so I just send them back to their classroom." Another teacher at the high school level said, "I have one BEH student and I don't say anything to him. If he does something that is wrong, I just ignore him and hope that he will stop...and they usually do."

The third area of discussion during the conversations focused on the lack of resources. All of the teachers identified the need for more time, money, curriculum materials, computers, manpower, workable relationships with the special needs teacher in the school, and/or vocational support persons. Time was most frequently identified as the most crucial of the needs. Over one-half of the teachers complained of not having the time to modify the

curriculum, not having the time to use task analysis to break down the material into simpler smaller steps, and not having the time to decide which competencies were the most important if all could not be taught to the students with special needs.

There was one theme which seemed to come through their comments. The teachers, though willing to say that they were unprepared, also felt that they could not do as good a job without the mentioned resources. I interpreted this as the teachers believing the system was to blame for the lack of preparation to teach handicapped students. Typical comments of the teachers were, "How can we be expected to do a great job with them when we don't have enough computers?" and "There simply is very little curriculum material available for special needs students" and "Maybe the state department of instruction should develop these materials, at least some resources and send them to us. Wouldn't you think?" The teachers identified the available resources and the extent to which each was used. It was revealed that although computers were not in every

classroom, there were computer laboratories in each school accessible to each teacher.

My observations of the classrooms revealed that this county provided many resources. This coupled with the earlier comments of feelings of inadequacy indicated that if the computers were more accessible, approximately 13 (93 percent) of the teachers were not knowledgeable in how to use them to individualize instruction. Neither were most of the teachers aware of computer software available in the field of home economics.

The data collected from the assessment interviews were used to identify the structure of the inservice sessions and allowed the researcher to interact with each teacher on a one-to-one level. The teachers admitted to lacking the skills necessary to effectively teach and a desire to want to learn. Therefore, the environment was made as supportive as possible by using a variety of activities, introducing concepts from the familiar to the strange, and inviting the teachers to ask questions freely at any point. The areas in which the teachers expressed feelings of inadequacy were used as major topics on the final

outline. The specific concerns and needs of the teachers were identified and given to each presenter to assist them in preparing to meet the needs of each participant. All of the areas in which the participants and the researcher perceived a need were presented during the instruction sessions and emphasized during the follow-up observation.

The interviews conducted at the school site provided the opportunity to observe the classroom settings and some of the resources available to the teachers. It also provided an opportunity for the teachers to explain their personal school situation in regard to time, money, curriculum, materials, and support persons. Identifying the lack of resources and personal school situations in advance of the formal instruction permitted the researcher and the presenters to develop strategies to address each situation.

Description of Sample by Demographic Variables

The interview conversations and the demographic section on the pretest revealed the following composite of

the teachers. The description of the sample is presented in Table 1. The participants were all female home economics teachers in the Wake county school system. Of the 14 teachers, 6 were assigned high school positions this year and 8 were assigned middle school teaching positions. All of the teachers volunteered for the inservice education.

The majority of the teachers had received no formal preparation for teaching students who required a modification in the regular educational program. Almost one-third of the teachers had participated in one or more inservice workshops or had a unit within a college methods course. Consumer and homemaking courses, in contrast to occupational courses, were most frequently identified as the areas in which the teachers needed the most assistance. The courses identified by the teachers in order of need were Foods and Nutrition, Clothing and Textiles, Interpersonal Relationships, Teen Living, and Independent Living.

In the pretest the teachers identified more learning disabled than behaviorally emotionally handicapped

Table 1

Description of Sample by Demographic Variables

Variable	No.=14	%
School Level		
High School	6	43
Middle School	8	57
Years of Teaching Experience		
Less than 5 years	2	14
5-10	2	14
10-15	3	21
15-20	2	14
Over 20	5	37
Formal Preparation to Teach Special Needs Students		
None	9	65
1 Inservice Workshop	3	21
3 Inservice Workshop	1	7
1 College Course	1	7

students. This was followed by the educable mentally handicapped students in their classes. The posttest revealed a change in the teachers' identification of the students as being LD, BEH, and EMH. The most prevalent category of students remained learning disabled. The second most prevalent category was educable mentally handicapped followed by behaviorally emotionally handicapped. Although the change in the identification of students was slight, it was believed that the change could be attributed to an increase in the knowledge of characteristics of each handicapping condition. All of the teachers reported having taught or were teaching learning disabled students. Over three-fourths (12) of the teachers had taught or were teaching educable mentally handicapped students and 8 (57 percent) of the teachers had taught or were teaching students identified as behaviorally emotionally handicapped.

Test of Hypotheses

Each hypothesis is presented with the data enumerated and examined, statistical procedures discussed, and results

analyzed. In testing the hypotheses, the performance of one group of teachers, on a pre and posttest, was compared using the two-tailed t-test for pairs, chi square, and Duncan's Multiple Range Test. The $p < .05$ level of significance was used to test all hypotheses.

Knowledge

Hypothesis 1: There is no significant difference in the teachers' knowledge of LD, EMH, and BEH students, before and after inservice education, in regard to
(a) general knowledge about handicapping conditions
(b) characteristics of learners
(c) instructional strategies
(d) behavior management/modification

Items 6-40 on the pre and posttest represented the evidence to test Hypothesis 1 (df = 13, pairs = 14). The total scores for this part of the pre and posttest were analyzed using the t-test and yielded a significant positive increase in the teachers' performance before and after education. Therefore, Hypothesis 1 was rejected. There was a significant positive increase in the subscores on each part of the pre and posttest. Scores on items 6-11 were used as evidence to test Hypothesis 1a. The scores to items 12, 13, 14, 19, 22, 27, 28, 29, 30, 31, 32, 33, and

37 were used to test Hypothesis 1b. Items 15, 18, 20, 23, 24, 25, 26, 36, 38, and 39 were used to test Hypothesis 1c. The scores from items 16, 17, 21, 34, 35, and 40 were used to test Hypothesis 1d. The results of the analysis for Hypothesis 1 are shown in Table 2.

Attitudes

Hypothesis 2: There is no significant difference in the teachers' attitudes before and after inservice education toward the integration of handicapped children into regular home economics classes.

The data used as evidence to test Hypothesis 2 were responses to items 41, 43, 44, and 45. The teachers held a positive attitude toward mainstreaming before the instruction. (See Table 3 for the percentage distribution of responses to mainstreaming.) Chi square yielded no significant differences in the attitudes toward mainstreaming before and after the inservice education because there was little room for a significant increase in their attitudes. Therefore, Hypothesis 2 was not rejected. (See Table 4 for chi square analysis of each item.)

Hypothesis 3: There is no significant difference in the teachers' attitudes before and after

Table 2

T-Test for Knowledge About LD, EMH, BEH Students

Before and After Inservice Training

Variables	t	df	p	Means	
				Pretest	Posttest
Overall knowledge of LD, EMH, BEH	7.114	13	.000*	59.92	79.14
General kowledge about handicapping conditions	3.767	13	.003*	65.78	81.07
Knowledge of characteristics of LD, EMH, BEH	5.501	13	.000*	60.57	81.42
Knowledge of instructional strategies	4.129	13	.001*	67.14	80.42
Knowledge of behavior management techniques	6.410	13	.000*	39.07	70.21

*p <.05

Table 3

Percentage Distribution of Responses to Mainstreaming (N=14)

Statement	Pretest A/SA%	Pretest U%	Pretest D/SD%	Posttest A/SA%	Posttest U%	Posttest D/SD%
Mainstreaming fosters greater understanding and acceptance of differences (Item 41)	78	14	8	93	7	0
Mainstreaming promotes social independence (Item 43)	78	22	0	93	7	0
Regular students benefit from mainstreaming (Item 44)	79	14	7	86	14	0
Mainstreaming has negative effects on the emotional development of exceptional children (Item 45)	14	22	64	7	14	79

Table 4

Chi Square Analysis of Teacher Attitude Toward Mainstreaming

Statement	X^2	df	p
Mainstreaming offers mixed group interaction which will foster understanding and acceptance of differences.	.999	2	.60
Mainstreaming of the special student will promote his/her social independence.	1.166	2	.50
The integration of special students can be beneficial for regular students.	2.000	2	.40
Mainstreaming is likely to have a negative effect on the emotional development of the special needs student.	.733	2	.70

*p < .05

inservice education toward the academic potential of handicapped students to adjust in regular home economics classes.

Items 42 and 47 were used to test for significant differences in the teachers' attitude toward the handicapped student's ability to function academically in the regular classroom. Almost one-half of the teachers on the pretest and almost all on the posttest disagreed with the statement that handicapped students would suffer academically in the regular classroom setting. (See Table 5 for the percentage distribution of responses to items 42 and 47). Chi square yielded no significant differences on items 42 and 47 before and after the education. Therefore, Hypothesis 3 was not rejected (see Table 6).

Hypothesis 4: There is no significant difference in the teachers' attitudes before and after inservice education toward their ability to teach mildly handicapped LD and EMH students in regular home economics classes.

Item 46 was used to test for significant differences between the teachers' perceived ability to teach mildly handicapped LD and EMH students before and after the education. Only one teacher believed she possessed the ability to teach mildly handicapped LD and EMH learners,

Table 5

Percentage Distribution of Responses to Attitude Toward Handicapped Students in Regular Setting (N=14)

Statement	Pretest A/SA%	Pretest U%	Pretest D/SD%	Posttest A/SA%	Posttest U%	Posttest D/SD%
Handicapped students will suffer academically in the regular classroom (Item 42)	28	29	43	7	7	86
Special needs students should be given every opportunity to function effectively in the regular classroom setting (Item 47)	64	29	7	86	7	7

Table 6

Chi Square Analysis of Teacher Attitude

Toward Handicapped Students

Statement	X^2	df	p
Handicapped students will suffer academically in the regular classroom.	5.6	2	.10
Special needs students should be given every opportunity to function effectively in the regular classroom setting.	3.322	2	.25

*p < .05

before the education; after the education, 10 of the teachers agreed with this statement. No one believed they could not teach this population. (See Table 7 for a distribution of percentages for item 46.) Chi square yielded significant positive increases in the teachers' perceived ability to teach mildly LD and EMH handicapped students before and after the education. Therefore, Hypothesis 4 was rejected. (See Table 8 for the chi square analysis of item 46.)

Hypothesis 5: There is no significant difference in the teachers' attitudes before and after inservice education toward their ability to teach mildly handicapped BEH students in regular home economics classes.

Item 48 was used to test for the relationship between the teachers' perceived ability to teach mildly handicapped students before and after the inservice. Before the training no one believed they possessed the ability to teach mild BEH students. After the training, only three teachers believed that they could not teach this population. Chi square yielded significant positive differences in the teachers' perceived ability to teach

Table 7

Percentage Distribution of Responses to Teacher Perceived Ability to Teach Mildly Handicapped Students in Regular Classroom Setting (N=14)

Statement	Pretest			Posttest		
	A/SA%	U%	D/SD%	A/SA%	U%	D/SD%
Ability to teach mildly handicapped LD and EMH students in the regular classroom (Item 46)	7	43	50	79	29	0
Ability to teach mildly handicapped BEH students in the regular classroom setting (Item 48)	0	36	64	29	21	50

Table 8

Chi Square Analysis of Teacher Perceived Ability

To Teach Mildly Handicapped LD, EMH, and BEH Students

Statement	X^2	df	p
I am capable of effectively teaching mildly handicapped LD and EMH students.	12.333	2	.01**
I am capable of effectively teaching mildly handicapped BEH students.	7.333	2	.05*

*p <.05 **p <.01

mildly handicapped BEH students (see Table 8). Therefore, Hypothesis 5 was rejected.

Scores on Pre and Posttest

Hypothesis 6: There are no significant differences among the means of the total score and subscores related to characteristics of learners, instructional strategies, and behavior management before and after the sessions.

The Duncan Multiple Range Test was used to test Hypothesis 6. The mean scores for the sections on characteristics, instructional strategies, behavior management, and the entire test were analyzed to determine if sections of the test were significantly different from the others. It was also used to determine differences in the performance level of the teachers on each section.

The mean scores of each section of the pretest revealed that the teachers scored significantly lower on the behavior management section than on other sections of the test and the entire test (see Table 9). Although the mean score on the entire test was not significantly different from characteristics and instructional strategies, the teachers performed better on instructional strategies followed by characteristics than on the entire

Table 9

Duncan Multiple Range Test for Knowledge

Sections of the Pretest

Analysis of Variance

Source	Sum of Squares	DF	Mean Scores	F
SS_t	15463	55	-	-
SS_b	8947.61	3	2982.5	2.380
SS_w	6515.39	52	125.3	

Mean Scores

(I)	Entire Test	59.92
(II)	Characteristics of Learners	60.57
(III)	Instructional Strategies	67.14
(IV)	Behavior Management	39.07

Standard Error of the Means = 2.99

Least Significant Difference (LSD)

For r = 2, LSD = 8.462

For r = 3, LSD = 8.910

For r = 4, LSD = 9.209

Table 9 (continued)

	Relationship of the Means		
IV	I	II	III
Behavior Management	Entire Test	Characteristics of Learners	Instructional Strategies
39.07 a	59.92 b c	60.57 c d	67.14 b d

test. Characteristics and instructional strategies were not significantly different. The data indicated that the teachers knew less about behavior management than characteristics and instructional strategies.

An analysis of the mean scores, on the posttest, revealed the teachers again scored lower on behavior management than other sections and the entire test. There was no significant difference between the mean scores of the entire test and behavior management. As in the pretest analysis, the entire test was not significantly different from the characteristics and instructional strategies sections. Characteristics and instructional strategies were not significantly different from each other. After the training, the teachers performed better, though not significantly so, on characteristics than on instructional strategies followed by the entire test. (See Table 10 for the calculation of the Duncan Multiple Range Test for the posttest.)

A comparison of the items missed in each section of the pre and posttest indicated that the teachers started the inservice with some knowledge of handicapping

Table 10

Duncan Multiple Range Test for Knowledge Sections of the Posttest

Analysis of Variance

Source	Sum of Squares	DF	Mean Scores	F
SS_t	8572.84	55	-	-
SS_b	1111.91	3	370.6	2.583
SS_w	7460.93	52	143.5	

Mean Scores

(I)	Entire Test	79.14
(II)	Characteristics of Learners	81.42
(III)	Instructional Strategies	80.42
(IV)	Behavior Management	70.21

Standard Error of the Means = 3.20

Least Significant Difference (LSD)

For r = 2, LSD = 9.056

For r = 3, LSD = 9.536

For r = 4, LSD = 9.856

Table 10 (continued)

	Relationship of the Means		
IV	I	II	III
Behavior Management	Entire Test	Instructional Strategies	Characteristics of Learners
70.21	79.14	80.42	81.42
a	a		
	b	b	b
	c	c	
		d	d

conditions, performed better on most items, and continued to have some difficulty with items in each section of the pre and posttest (see Appendix H). An analysis of the knowledge items on the assessment instrument revealed that the teachers started the inservice knowledgeable of the most common handicapping condition, reasons for classifying special needs students, and general characteristics about mildly handicapped learners. The items to which the teachers responded correctly on the pre-assessment included items 7, 11, 13, 14, 15, 18, 20, 21, 29, 33, 10, 33, 37, and 39.

The teachers missed fewer items after the inservice, regarding specific facts about handicapping conditions, i.e., prevalence and categories, concepts associated with the special needs population, and the application of concepts, skills, and strategies. These items included 8, 9, 12, 16, 17, 19, 22, 23, 25, 28, 31, 34, 35, and 38.

Items with which the teachers continued to have some difficulty focused on technical concepts, facts, and the application of both in specific situations. Responses to these situations required an understanding of materials

distributed during the instruction sessions. These items were found in each section of the assessment instrument (6, 21, 24, 26, 30, 32, 36, and 40).

Evaluation of the Instruction Sessions

The evaluation of the formal instruction phase of the inservice education was conducted by the participants at the end of the posttest. There were 16 items which focused on the organization, presentation, participation involvement, and utilization of resource materials. A scale consisting of strongly agree, agree, undecided, disagree, and strongly disagree was used. Each choice was assigned a point value with 5 representing strongly agree to 1 representing strongly disagree. The overall rating for the instruction sessions was 4.7 out of a possible 5 (see Appendix E).

Follow-up Observation

A follow up visit was conducted at the school site of each participant to observe the implementation of strategies and techniques presented at the workshop. The

visit was also designed to provide technical assistance in implementing the strategies and techniques. A post observation conference was conducted immediately following each observation. During the post conference, teachers reflected on the teaching experience and discussed other concerns. The teachers were asked to orally review the lesson as they perceived it to take place. They then explained how they normally taught the lesson, before the inservice education. From this discussion the teacher and observer identified new skills that were implemented. The teachers were asked why specific strategies and techniques were chosen and others were not. They were very successful in justifying the use of certain strategies and not using others. Although many of these strategies were new to them all of the teachers were able to identify what changes to make for the next lesson. There were some skills demonstrated that the teachers did not identify. These skills were mainly strategies the teacher used regularly. Such skills included communicating the "why" of things, working to establish trust, using a variety of activities,

and prompting the students with cues as to the correct answer.

The affective skills most frequently observed during the classroom observation were establishing eye contact, giving positive reinforcement that was sincere and honest, helping each student to recognize his/her own potential, using the interest of the students as a springboard for lessons and discussions, involving students in activities in which they could be successful, and touching the student when appropriate.

The teachers required more assistance with two skills in particular: talking with the student and not to the student, and setting up short range goals so that the students could see their accomplishments more quickly. It was suspected that the second skill was more difficult to learn because the teachers have difficulty in task analysis.

The specific cognitive skills most frequently observed were (a) using the six point lesson plan to present the lesson, (b) making certain the written materials were attractive, legible, and appropriate size letters and

diagrams, (c) reducing the length of the task and the number of practice items, (d) giving immediate feedback and allowing more time for a response from the students, (e) keeping in close proximity of the special needs students, (f) grouping the students in pairs according to similar abilities and mixed abilities, (g) choosing appropriate types of activities that were not too difficult or included too many concepts, and (h) varying the degree of teacher input based on the individual child.

Some of the teachers had reduced the readability level of the material and were uncertain if the materials were age appropriate. Assistance was provided in checking the process used and the actual level. In most instances the teachers were either age appropriate or one grade level above or below the target level. This was considered successful for first attempts to reduce the level of the materials. Although the teachers reduced the number of practice items and the length of the tasks, they were uncertain if what had been done was appropriate. Uncertainty of teacher performance was to be expected since this was the first time many of the strategies had been

attempted. All of the teachers were encouraged to formally assess the learning styles of the students and their teaching styles and to make more accommodations whenever possible. All of the teachers were also encouraged to vary the techniques for student response to include verbal, written, role play, and pantomime.

The primary concerns of many of the teachers were (a) the lack of vocational support persons at the high school level to assist them in implementing these techniques, (b) whether they had communicated at the appropriate level of each student, (c) whether the students were given enough teacher direction without being left alone too long, (d) how to involve the parents in the process of learning, how to teach the parents the strategies and techniques they have learned in order to reinforce the skills at home, and (e) how effective these techniques would be if other teachers were not skilled in using them in other classes.

The teachers were also asked to reflect on the entire inservice process and content and respond to the following statement, "Overall, this inservice education program was a

successful educational experience for me." The average rating for the inservice education was 4.9 on a 5 point scale. One teacher expressed concern over the extensive amount of time involved in the inservice education.

Discussion

The model developed for this study reflected the stages of other models which resulted in significant positive differences before and after inservice education as reported in the review of literature. The technical assistance model (Trohanis & Jackson, 1980), the action research model (Oliver, 1980), the job embedded model (Shaw, 1985) and the supervision model (Reinhartz & Beach, 1987) all empahsized the importance of assessing the needs of the individuals and the environment. Jones and Hayes (1980) found that teachers' perceptions of their needs may not present an accurate assessment. Therefore a formal written assessment was conducted by the researcher in this study to also identify the needs of the teachers. However none of the models emphasized a personal interview with the teachers.

All of the models emphasized some form of instruction. Studies conducted by Zigarmi et al. (1977) and Ngaiyaye and Hanley (1978) on the types of inservice teachers preferred, supported the instruction format used in this study. Powers (1983) and Joyce and Showers (1980) recommended using a variety of activities in order to accommodate all learning styles, the acquisition of skills, and the development of positive attitudes toward the inservice program being introduced. The evaluation of the developmental and academic results, and of the technical assistance provided in this study are especially evident in the technical assistance, action research, and liaison models (Beck, 1982; Oliver, 1980; Trohanis & Jackson, 1980). Oliver (1980) incorporated follow-up activities within the action research model that included a ongoing review of performance and results as well as an evaluation of the overall plan. However, neither Oliver nor any of the other researchers specified a post observation conference between the teacher and supervisor.

The unique aspect of this model, which was not evident in other studies and served as the foundation of this

model, was the open-ended interviews with the teachers. The first interview focused on the personal experiences of the participants in teaching exceptional children and were verbally communicated to the researcher. The open-ended interview was a critical component of this model in that the needs, problems, and concerns identified were the foundation for the instruction, evaluation, and follow-up phases of the model. The interview allowed the teachers to share their experiences; the researcher to gain an understanding of the teachers' experiences; the teacher and researcher to identify the needs, problems, and concerns of the teacher; and the teachers to state specific professional and personal goals for the inservice. Therefore, it is recommended that teachers be consulted in establishing professional and personal goals for inservice education programs. Another unique aspect of this model was the participation observation as a form of follow-up which included a second interview or post conference on the observation experience. This interview allowed the teachers to reflect on the lessons and share areas of success as well as areas difficulty. It also provided the

opportunity to verbally share the experience of using the acquired skills, strategies, and techniques with special needs learners.

The major areas of inadequacies identified by the participants in this study during the first interview were similar to the six categories of competencies identified in the study conducted by Redden (1976). Since 64 percent of the teachers lacked any formal preparation to work with special needs students, there appeared to be a strong need for inservice and preservice education. This was especially true for consumer and homemaking courses as opposed to occupational courses in that Foods and Nutrition, Clothing and Textiles, and Interpersonal Relationships were the three most frequently identified courses in need of assistance.

The teachers not only identified areas of inadequacy for themselves but also expressed a strong desire to learn to teach the mildly handicapped LD, EMH, and BEH students. This finding was expected due to the fact that the teachers volunteered for the inservice and also because it was a significant finding in a study conducted by Gans (1987).

Therefore, attempts should be made to provide opportunities for more frequent and comprehensive inservice education programs.

The researcher believes that the teachers scored higher on instructional strategies and characteristics than behavior management because initial teacher education programs focus more on these two areas than on behavior management. Pugach (1987) analyzed the national education reports on special education and also found that teachers were ill prepared to intervene with appropriate management strategies and should be strengthened in this area. It is strongly suggested that future inservice education programs, using this model, place more emphasis on behavior management techniques. The posttest revealed a slightly higher increase in the scores on the characteristics section than on the instructional strategies section. The probability that this occurred by chance is relatively high in that the increase was marginal and the sample was small.

The items missed in each section of the pre and posttest revealed that the teachers started the inservice

with a general knowledge of characteristics of learners. The high level of knowledge on the characteristic section of the assessment may be attributed to the fact that many of these general characteristics may apply to low functioning students not identified as handicapped, with whom the teachers probably had contact. It could also have been affected by the fact that characteristics of learners are normally taught in teacher education programs. Stainback and Stainback (1984) found that the skills needed to teach in the nonmainstreamed structure were the same as those needed for effective mainstreaming. The teachers were also knowledgeable of general facts regarding instructional strategies. Haisley (1978) stated that good teachers have always used the skills needed to implement P. L. 94-142.

The teachers also performed better on some items than on others. The teachers were better able to apply the appropriate concepts, strategies, and techniques after the inservice than before the inservice. Thus the inservice increased their knowledge base as well as their ability to

identify and implement appropriate methods (Anderson, 1976; Mangieri & Kemper, 1983; Phelps, 1978; Tindall, 1978).

Some difficulty remained with items that required specific responses. This could be attributed to the teachers' failure to read or review the materials received during the instruction sessions as they were encouraged to do. The reading was designed to explain and enhance the concepts presented during the instruction sessions. The items missed by each teacher could serve as personal goals for that teacher in the follow-up activity (Grossnickle, 1987; Oliver, 1980). The missed items could also indicate major topics for other seminars or sessions. The researcher recommends that more emphasis be placed on the concepts presented in the incorrect items for future inservice programs. Although this inservice was comprehensive in its approach, the time frame did not permit for in-depth study. Therefore these findings support those of other studies recommending continuous preparation of teachers to effectively serves mildly handicapped learners (Department of Education, 1985;

Dunaway, et al., 1987; Oliver, 1980; Pugach, 1987; Rocha & Sanford, 1985; Tindall, 1978; Trohanis & Jackson, 1980).

The follow-up observations revealed that some of the teachers had difficulty implementing a few of the strategies and techniques. The models which placed emphasis on follow-up activities included a stage in the model in which the teachers could start the cycle of assistance again depending on the results (Oliver, 1980; Reinhartz & Beach, 1987; Trohanis & Jackson, 1980). It is believed that the teachers would be more successful in implementing these strategies and techniques if the learning styles of the students were formally assessed and used to make more accommodations in teaching styles whenever possible. The teachers were also encouraged to vary the techniques for student response options to include verbal, written, role play, and pantomime. During the observation follow-up, the teachers successfully demonstrated how to modify the regular home economics curriculum and how to use task analysis in teaching home economics concepts. The researcher believes this will help

to compensate for the lack of home economics related curriculum materials for handicapped students.

The inservice education format and content were found to be very effective in educating home economics teachers to serve special needs students. It is highly probable that the rating of 4.7 for the instruction sessions was high because the sessions addressed the specific needs of each teacher as identified in the interview. One probable reason for the 4.9 overall rating may be that the teachers were successful in implementing the majority of the strategies and techniques presented in the workshops. It is evident that the teachers benefited from a comprehensive inservice education program which included follow-up activities.

The strengths of the model developed for this study included the open-ended interviews used to identify teacher perceived needs, problems, and concerns; the pre and post-assessments of the participants' performance; the active participation of the observer during the follow-up activity; and the evaluation of the model after the instruction and follow-up phases.

The model may be enhanced by conducting longer and more in-depth interviews and by videotaping the observations for discussion purposes during the post conference. The significant positive results of the teachers' performance on the posttest and in the classroom may be attributed to several factors: the initial positive view held by the teachers toward mainstreaming and the special needs students, the fact that the teachers volunteered to participate indicated they were committed to becoming more efficient with this student population, the instruction was geared toward the specific goals and objectives of each teacher, and the use of certified special educators to implement the instruction sessions. Due to these factors, the teachers' confidence levels were raised and the teachers were motivated and more skilled in implementing the appropriate strategies and techniques. To further analyze the effectiveness of this model, it is recommended that a similar study be conducted using a control group to compare the performance of the teachers with the complete model to the performance of teachers with one written assessment and follow-up observations only.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to develop, implement, and evaluate a model for educating vocational teachers to work more effectively with LD, EMH, and BEH students. An inservice education model consisting of four phases was developed, implemented, and evaluated. Fourteen home economics teachers employed by the Wake County School System composed the sample. The majority of the teachers had no formal education in working with special needs students, however, the teachers expressed a strong desire to learn how to teach LD, EMH, and BEH students. Approximately three-fourths of the teachers identified a willingness to teach special needs students as their greatest strength in working with this student population.

A personal interview was conducted with each teacher at the school site to identify teacher perceived needs and concerns. Each teacher completed a pre and post-assessment instrument prior to and at the end of the formal instruction which was held for six hours on two consecutive

Saturdays. The teachers received 1.8 certificate renewal credits from the North Carolina State Department of Public Instruction. Certified Home Economists received 12 professional development units for participation in the workshop.

The model developed for this study consisted of four phases. The needs assessment phase was comprised of the open-ended interviews and the pretest. The needs of the teachers were identified by the teachers and the researcher. The data from the interviews were used to finalize the outline for the instruction sessions. The instruction phase specifically addressed the skills needed to effectively teach special needs students in the regular classroom setting. The evaluation phase of the model focused on the evaluation of the instruction phase and the posttest evaluation of the teachers' performance. Phase four, the follow-up, consisted of participant observations in which the observer (researcher) was actively involved in the situations being observed. A minimum of two classes were observed. A post conference was conducted with each

teacher at the end of the observation(s) to reflect on and discuss the observation experience.

Part I of the assessment instrument focused on demographics. Part II focused on general knowledge about handicapping conditions, characteristics of the mildly handicapped, instructional strategies, and behavior management techniques (Kirk & Gallagher, 1989). The two-tailed *t*-test for pairs was used to compare the mean subscores of the knowledge section of the pre and posttest. Part III of the assessment instrument focused on the teachers' attitudes toward mainstreaming, handicapped students, and their perceived ability to teach special needs students. Chi square was used to test for significant differences in the attitudes of the teachers before and after the inservice education.

The Duncan Multiple Range Test was used to determine the relationships among the mean scores of the total test, and the sections related to characteristics, instructional strategies, and behavior management. It was also used to identify the areas where the teachers scored significantly different on sections of the assessment instrument.

Participant observation was the form of follow-up selected for this study. The formative data collection instrument currently used by teacher effectiveness training programs was used to record the activities of the teacher and students. A post conference was conducted to identify the skills used and the justification for the strategies and techniques chosen for that lesson. The teachers were asked to identify alternative strategies and techniques for future lessons. The observation period was also used to identify the areas in which the teachers needed continued skill development.

The participants completed an evaluation of the formal instruction sessions using the evaluation form provided by the Wake County Board of Education. The rating for the sessions was 4.7 out of a possible 5. The overall rating for the inservice education program was 4.9 out of a possible 5.

Hypotheses Tested

Six hypothesis were tested in this study. Hypothesis 2 and Hypothesis 3 were not rejected because there were no

significant differences in the teachers' attitudes toward mainstreaming or toward the handicapped learners. Four hypotheses were rejected because of significant positive differences before and after the inservice. The teachers' knowledge of LD, EMH, and BEH students increased significantly in regard to characteristics of learners, appropriate instructional strategies, and behavior management techniques. There was a positive increase in the teachers' attitude toward their ability to teach LD, EMH, and BEH students in the regular home economics classroom.

The Duncan Multiple Range Test was used to determine if there were significant differences between the means of the total score and the subscores on the pre and posttests. An analysis of the mean scores revealed that the teachers performed significantly lower on behavior management than on instructional strategies, characteristics of learners, and the entire test, on both the pre and posttests. There were no significant differences in the teachers' performance on the entire test

and the sections on instructional strategies and characteristics of learners on the pre or posttest.

Further Research

The following recommendations are made based upon the findings of this study.

1. Conduct a study to test the effectiveness of curriculum materials, lesson plans, and projects designed for mildly handicapped LD, EMH, BEH learners in the consumer and homemaking courses.

2. Conduct a study to evaluate existing curriculum materials to determine the available resources and their relevancy to the concepts currently being taught; which consumer and homemaking courses lack resources; and the availability of resources for LD, EMH, BEH students and the extent of their use.

3. Conduct a study to compare the effectiveness of peer teaching, individual modules, and participant observation as follow up activities to inservice education.

4. Conduct periodic follow up activities with the same teachers over the next school year, and compare the

attitudes of the teachers, testing for significant differences in knowledge and attitude over time.

5. Conduct a study to compare the effectiveness of teaching models on the mildly handicapped LD, EMH, and BEH learners to identify which model(s) are most appropriate for each handicapping condition.

6. Replicate this study with other areas of vocational education to compare the performance, needs, and concerns of the areas. A comparison could also be made of attitudes of teachers toward mainstreaming and handicapped students.

7. Conduct a study using a control group to compare the performance of the teachers with the complete model to the performance of teachers with the written assessment and follow-up observations only.

BIBLIOGRAPHY

Alexander, C., & Strain, P. S. (1978). A review of teacher's attitudes toward handicapped children and the concept of mainstreaming. Psychology in the Schools, 15(3), 390-396.

American Psychological Association (1983). Publication manual of the American Psychological Association (3rd ed.). Washington, D.C.: Author.

Anderson, R. D. (1976). A staff development program for mainstreaming handicapped students (doctoral dissertation). Dissertation Abstract International, 36, 759A.

Beavers, I., & Charlson, N. R. (1986). Inservice needs assessment of home economics educators. Journal of Vocational Home Economics Education, 4(1) 53-60.

Berryman, J. D., & Neal, W. R. (1980). The cross validation of the attitudes toward mainstreaming scale (ATMS). Educational and Psychological Measurement, 40, 469-475.

Berryman, J. D., Neal, W. R. & Robinson, J. E. (1980). The validation of a scale to measure attitudes toward the classroom integration of disabled students. Journal of Educational Research, 73, 199-203.

Beck, C. (1982). The liaison model: An approach to cooperative inservice program planning. (ERIC Document Reproduction Service No. ED 17 2123).

Boote, K. S. (1976). Principal and teacher perceptions of special education inservice programs for regular elementary teachers (doctoral dissertation, Temple University, 1976). Dissertation Abstracts International,

Brown, R. T. (1980). A closer examination of education for all handicapped children act: A guide for the 1980s. Psychology in the Schools, 17(3), 355-360.

Byrne, R. (1983). Inservice programs: What are the essentials for making them effective. NASSP Bulletin, 67(461), 1-7.

Carpenter, B. W. (1978). Selected educators' perceptions toward the study of mainstreaming in home economics programs (doctoral dissertations.) Dissertation Abstract International, Kansas State University, 2788A.

Carri, L. (1985). Inservice teachers' assessed needs in behavioral disorders, mental retardation, and learning disabilities: Are they similar? Exceptional Children, 51(5), 411-416.

Cohen, S. (1977). Improving attitudes toward the handicapped. The Educational Forum, 42(1), 9-20.

Department of Education (1985). State Vocational Education Program and Secretary's Discretionary Programs of Vocational Education: Proposed Rule. Federal Register, Part III, 3626-3667.

Donohue, K. (1978). Career education for the handicapped: The vocational school psychologist as consultant. School Psychologist Digest, 7, 55-59.

Dunaway, M., Mechenbier, P., Parson, K., & Wright, C. (1987). A practical approach to making inservice programs more valuable. NASSP Bulletin, 71(497), 17-19.

Dyck, N. J., & Thurston, L. P. (1987). A promising teacher training model for rural settings. (ERIC Document Reproductions Service No. 202 806)

Fiorentino, M. (1978). A study of the effects of a short term inservice education program on regular classroom teachers attitude and knowledge of mainstreaming (doctoral dissertation). Dissertation Abstract International, University of Massachusetts, 1978, 232.

Gans, K. D. (1987). Willingness of regular and special educators to teach students with handicaps. Exceptional Children, 54(1), 41-45.

Glass, R. M., & Meckler, R. S. (1972). Preparing elementary teachers to instruct mildly handicapped children in regular classrooms: A summer workshop. Exceptional Children, 39, 152-156.

Glazzard, P. (1980). Adaptations for mainstreaming. Teaching Exceptional Children, Fall, 26-29.

Good, T. L., & Brophy, J. E. (1972). Behavioral expression of teacher attitudes. Journal of Educational Psychology, 63(6), 617-624.

Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill.

Greenan, J. P., & Phelps, A. L. (1982). Delivering vocational education to handicapped learners. Exceptional Children, 48(5), 408-411.

Grossnickle, D. (1987). Inservice follow-up --What to do after the expert leaves. NASSP Bulletin, 71(497), 11-15.

Haisley, F. B. (1978). Individual competencies needed to implement P.L. 94-142. Journal of Teacher Education, 29(6), 30-33.

Hall, J., Benninga, J., & Clark, C. (1983). A three part model: A comprehensive approach to the inservice training of teachers. NASSP Bulletin, 67(461), 17-21.

Harasymiw, S. J., & Horne, M. D. (1976). Teacher attitude toward handicapped children and regular class integration. Journal of Special Education, 10,(4), 393-399.

Hohenshil, T. H., & Warden, P. (1978). The emerging vocational school psychologist: Implications for special needs students. School Psychologist Digest, 7, 5-9.

Horne, M. (1979). Attitudes and mainstreaming: A Literature review for school psychologist. Psychology in the Schools, 16(1), 61-67.

Jones, L., & Hayes, A. E. (1980). How valid are surveys of teacher needs? Educational Leadership, 37(5), 390-392.

Jordan, J. E., & Proctor, D. I. (1972). Relationship between knowledge of exceptional children, kind and amount of experience with them, and teacher attitude toward their classroom integration. Journal of Special Education, 3(4), 433-439.

Joyce, B., & Showers, B. (1980). Improving inservice training: The messages of research. Educational Leadership, 37(5), 379-385.

Kaping, R., & McKeag, R. (1983). Brown bag seminars: An answer to the persistent inservice problem. NASSP Bulletin, 64(461), 39-41.

King, J. C., Hayes, P. C., & Newman, I. (1977). Some requirements for successful inservice education. Phi Delta Kappan, 58, 686-687.

Kirk, S. A., & Gallagher, J. J. (1983). Educating Exceptional Children. (5th ed.). Boston Houghton Mifflin Company.

Kirk, S. A., & Gallagher, J. J. (1989) Test Bank for Educating Exceptional Children. (6th ed.). Boston: Houghton Mifflin Co.

Knoff, H. M. (1985). Attitudes toward mainstreaming: A status report and comparison of regular and special educators in New York and Massachusetts. Psychology in the Schools, 22, 410-418.

Kupisch, A. G. (1975). Indiana elementary teachers' preferences of in-service training models on mainstreaming (Doctoral Dissertation, 1975). Dissertation International Abstract, 36, 6017A.

Larrivee, B. (1981). Effect of inservice training intensity on teachers attitudes toward mainstreaming. Exceptional Children, 48(1), 34-39.

Lerner, J. (1985). Learning disabilities: Theories, diagnosis, and teaching strategies. Dallas: Houghton Mifflin Co.

Levinson, E. M., & Capps, F. C. (1985). Vocational assessment and special education triennial reevaluations at the secondary level. Psychology in the Schools, 22(3), 283-292.

Mangieri, J. N., & Kemper, R. E. (1983). Administrators: The keys to successful inservice programs. NASSP Bulletin, 67(461), 26-31.

Meers, G., & Conaway, C. (1978). Vocational education's role in career education for handicapped students. School Psychology Digest, 7, 39-42.

Mercer, A. R., & Mercer, C. D. (1985). Teaching students with learning problems. Ohio: Merrill Publishing.

Moore, J., & Fine, M. J. (1978). Regular and special classroom teachers' perceptions of normal and exceptional children and their attitudes toward mainstreaming. Psychology in the Schools, 15(2), 253-259.

Ngaiyaye, M. S. W., & Hanley, J. L. (1978). What teachers want from inservice education. North Central Association Quarterly, 53(2), 305-311.

Oliver, B. (1980). Action research for inservice training. Educational Leadership, 37(5), 394-395.

Phelps, L. A. (1978). Vocational education for special needs learners: Past, present, and future. School Psychologist Digest, 7, 18-34.

Powers, D. A. (1983). Mainstreaming and the inservice education of teachers. Exceptional Children, 49(5), 423-439.

Psychology of Exceptional Children (1978). Special education glossary of terms. Psychology of Exceptional Children.

Pugach, M. (1987). The national education reports and special education: Implications for teacher preparation. Exceptional Children, 53(4), 308-314.

Pugach, M., & Sapon-Shevin, M. (1987). New agendas for special education policy: What the national reports haven't said. Exceptional Children, 53(4), 295-299.

Redden, M. R. (1976). An integration of mainstreaming competencies of regular elementary teachers (doctoral dissertation, University of Kentucky, 1976). Dissertation Abstract International, 1976, 37, 3322A (University Microfilm No.76-28,120).

Redick, S. S. (1986). Home economics curriculum development or special needs population (in Home Economics Teacher Education Yearbook XI: Vocational Home Economics Curriculum). Washington: American Home Economics Association.

Reinhartz, J., & Beach, D. M. (1987). A comprehensive supervision model for promoting professional development. Clearinghouse, 60(8), 363-366.

Rist, R. C. (1982). On the application of ethnographic inquiry to education: Procedures and possibilities. Journal of Research in Science Teaching, 19(6), 439-450.

Rocha, R. M., & Sanford, H. G. (1985). An action plan approach to inservice training. (ERIC Document Reproductions Service No. ED 257 307)

Rogus, J. F. (1983). Building an effective staff development program: A principal's checklist. NASSP Bulletin, 67(461), 8-15.

Rude, C. R. (1978). Trends and priorities in inservice training. Exceptional Children, 45, 172-176.

Ryor, J., Shanker, A. & Sandefur, J. T. (1979). Three perspectives on inservice education. Journal of Teacher Education, 30(1), 13-23.

Sapon-Shevin, M. (1987). The national education reports and special education: Implications for students. Exceptional Children, 53(4), 300-306.

Sedlack, R. A., & Sedlack, D. M. (1985). Teaching the educable mentally retarded. New York: State University of New York Press.

Shapiro, H. S. (1983). Educational research, social change, and the challenge of methodology: A study of the sociology of knowledge. Phenomenology and Pedagogy, 1(2), 127-139.

Shaw, S. F. (1985). A school-based inservice training program for special education placement teams. (ERIC Documents Reproductions Service No. ED 257 267)

Shotel, J. R., Iano, R. P., & McGettigan, J. F. (1972). Teacher attitudes associated with the integration of handicapped children. Exceptional Children, 38(9), 677-683.

Stainback, W., & Stainback, S. (1984). A rational for the merger of special and regular education. Exceptional Children, 51(2), 102-111.

Tindall, L. W. (1978). Breaking down the barriers for disabled learners. School Psychology Digest, 7, 34-38.

Tharpe, F. R. (1984). A comparative analysis of needs and attitudes of home economics teachers in North Carolina who did and did not attend the 1983 vocational summer workshop in relation to inservice education (doctoral dissertation, University of North Carolina at Greensboro).

Thurman, R. L. (1980). Mainstreaming: A concept educators should embrace. The Educational Forum, 44(3), 285-292.

Trohanis, P., & Jackson, E. (1980). The technical assistance approach to inservice. Educational Leadership, 37(5), 386-389.

U.S. Department of Education (1984). Sixth Annual Report to Congress on the Implementation of Public Law 94-142: The Education for All Handicapped Children Act. Executive Summary. Exceptional Children, 5(3), 100-202.

Webb, J. D. (1985). Home economics teachers' knowledge and attitudes toward the integration of special needs students in the classroom (doctoral dissertation, University of North Carolina at Greensboro).

Weisgerber, R. (ed.) (1978). Vocational education: Teaching the handicapped in regular classes. The Council for Exceptional Children.

Wood, F. H., & Thompson, S. R. (1980). Guidelines for better staff development. Educational Leadership, 37(5), 374-378.

Yates, J. R. (1973). Model for preparing regular classroom teachers for "mainstreaming". Exceptional Children, 39, 471-472.

Zigarmi, P., Betz, L., & Jensen, D. (1977). Teachers' preferences in and perceptions of in-service education. Educational Leadership, 34, 545-551.

APPENDIX A
COVER LETTER

October 17, 1989

Ms. Abby Kurtz:
Wake County Schools
Vocational Ecucation
P.O. Box 28041
Raleigh, North Carolina 27611

Dear Ms. Kurtz:

This letter is in reference to our telephone conversation on Tuesday, October 17, 1989. I am a doctoral student at the University of North Carolina at Greensboro. I have developed an inservice education model to assist home economics teachers in serving learning disabled, educable mentally handicapped, and behaviorally emotionally handicapped students in the regular vocational classroom. The model focuses on developing skills in diagnostic-prescriptive teaching, intervention and remediation, modifying instruction, behavior management, and evaluation of the special needs student.

The inservice model, for all of the middle and secondary home economics teachers in Wake county. The inservice workshop will have three primary objectives which are to (1) increase the knowledge base of teachers in regard to LD, EMH, and BEH students; (2) to increase the quality and quantity of skills possessed by the teachers; and (3) to create a positive attitude toward exceptional children through meaningful experiences. The preferred schedule for inservice is a six hour session on two Saturdays, one in late January and the other in early February. It is believed that this time would be most beneficial for the teachers, after receiving new curriculum materials at summer conference. However, this schedule is flexible.

The training will consist of interviewing each of the teachers during the month of November and a follow-up visit in February to observe the teachers implementing the learned stategies and techniques and to offer further assistance.

Having taught at Harnett Central High School for five years (1980-1985), and a vocational resource teacher at Hillside High School (1985-1986), I am aware of the teachers' concern for effectively meeting the needs of all their students.

Please find enclosed, an abstract of the proposed workshop, the significance of the inservice, the structure of the workshop, a description of the instrument to be used for pre and post-assessment, and a copy of the instrument. Please do not hesitate to contact me if further information is needed.

Sincerely,

Debra O. Parker
Doctoral Student
Home Economics Education

Dr. Mildred Johnson
Professor
Home Economics Education

APPENDIX B
INTERVIEW QUESTIONNAIRE

INTERVIEW QUESTIONNAIRE

1. How long have you been teaching?
   How long have you been teaching Home Economics?

2. Do you enjoy teaching? Why/Why Not?
   What does it mean, to you, to be a teacher?

3. Have you ever taught special needs students?
   How long?

4. How do you feel having regular students mainstreamed into your regular classroom?

5. Do you think that a student with special needs should be mainstreamed?

6. Do your now teach or have you ever taught a self-contained class for special students?

7. Do you prefer to have children with special needs in a separate class? Why/Why Not?

8. What do you see as your greatest strengths in teaching this student population?

9. What do you see as your greatest weakness in teaching this student population?

10. How comfortable are you in accessing and diagnosing:
    Learning Styles
    Handicapping Conditions
    Educational Needs of Handicapped Students?

11. What formal/informal preparation have you had to teach handicapped students?

12. What do you hope to gain from this workshop?
    What would be the greatest help to you in preparing you to teach handicapped students?

APPENDIX C
PRE AND POST-ASSESSMENT INSTRUMENT

PRETEST/POSTTEST

Part I
Directions: Items 1-5 address demographic data. Rank items 1, 3, and 4 with 1 representing the most frequent and 5 representing the least frequent. Place an "X" beside the most appropriate answer for items 2 and 5.

1. Identify the handicapping conditions most prevalent in your classes.
   _____ Learning Disabled
   _____ Educable Mentally Handicapped
   _____ Behaviorally/emotionally handicapped

2. What is the extent of your preparation to teach special needs students with special needs:
   _____ one or more college courses
   _____ 1-2 inservice training sessions
   _____ 3-5 inservice training sessions
   _____ more than 5 inservice training sessions
   _____ no preparation
   _____ other

3. What subject areas are you now teaching in the home economics curriculum:
   _____ Foods
   _____ Nutrition
   _____ Clothing Construction
   _____ Housing
   _____ Independent Living
   _____ Interpersonal Relationship
   _____ Other

4. In which of these subject matter areas do you feel you need assistance in teaching and/or planning instruction for special needs students.
   _____ Foods
   _____ Nutrition
   _____ Clothing Construction
   _____ Housing
   _____ Independent Living
   _____ Interpersonal Relationship
   _____ Other

5. Years of teaching experience:
   _____ less than 5
   _____ 5-10
   _____ 10-15
   _____ 15-20
   _____ over 20

Part II
Directions: Items 6-42 address knowledge of handicapping conditions. Circle the most appropriate response. Circle only one answer for each item.

6. When might children be classified as exceptional?
   a. When they obtain below-average IQ scores
   b. When they display inappropriate social behavior for their ages
   c. When they require a modification of school practices if they are to develop appropriately
   d. When they require special services added to their school program in order to learn

7. Which of these handicapping conditions is most common among school-age children?
   a. Emotionally disturbed
   b. Hearing impaired
   c. Learning disabled
   d. Mentally retarded

8. The total population of exceptional children, including those who are gifted and talented, is approximately _____ percent of the total school enrollment.
   a. 5 to 10
   b. 10 to 15
   c. 15 to 20
   d. 20 to 25

9. Three areas in which instruction can be adapted to meet interindividual or intraindividual differences are through
   a. content, consensus, and adjustment.
   b. content, skills, and the learning environment.
   c. learning environment, adjustment, and skills.
   d. skills, content, and adjustment.

10. The primary reason for going through the process of identification and diagnosis is to
    a. learn more about the child's personality.
    b. learn more about the nature of the problem area.
    c. place the child in an environment in which his or her needs will be better met.
    d. place the child in an environment in which learning objectives are utilized.

11. Why have children with exceptionalities been grouped together in various categories through classification?
    a. It allows for the organization of special remedial programs.
    b. Some children need to be isolated from others.
    c. Exceptional children fit into neat, well-defined categories.
    d. Educators agree that categorization is the best approach.

12. Kelli has an IQ of 60. Which of these best describes her level of intelligence.
    a. Mild retardation
    b. moderate retardation
    c. Normal intelligence
    d. Severe and profound retardation

13. Which of these is not a dimension that distinguishes mildly retarded children .rom children who are not retarded?
    a. Cognitive processes
    b. Language acquisition
    c. Motor abilities
    d. Physical size

14. Which of these is the most obvious characteristic of children who are mildly or moderately retarded?
    a. Limited cognitive ability
    b. Limited motor ability
    c. Limited verbal ability
    d. Limited emotional ability

15. Breaking down a complex task into simpler subtasks is referred to as
    a. task analysis
    b. task avoidance
    c. motor abilities
    d. task phobia

16. How can socialization skills best be taught to children who are mentally retarded?
    a. Directly in the setting in which they occur
    b. Indirectly where they transfer from one setting to another
    c. Through constant drill and role playing
    d. Through occasional drill

17. One of the tenets of behavior modification is the belief that the quickest way to eliminate an unacceptable behavior is to
    a. ignore it
    b. punish it
    c. negatively reinforce it
    d. reward it

18. At the secondary level, the major focus of learning for mentally retarded students should be to develop
    a. more detailed knowledge in each content area.
    b. greater social awareness.
    c. greater depth in one or two subject areas.
    d. prevocational and work/study skills.

19. Approximately what percentage of mildly retarded adults eventually adjust to occupations of an unskilled or semiskilled nature and support themselves either partially or totally?
    a. 20 percent
    b. 40 percent
    c. 60 percent
    d. 80 percent

20. To improve the academic skills of mentally retarded students the schools must make adjustments in
    a. curriculum
    b. the educational setting
    c. teaching strategies
    d. all of these

21. Which of these procedures has been found to be most effective in reducing disruptive and inappropriate social behavior?
    a. Task analysis
    b. Time out
    c. Listing social expectations
    d. Prevocational social contracts

22. What proportion of all students enrolled in public school special education programs have learning disabilities?
    a. About one fifth
    b. About one fourth
    c. About one third
    d. About half

23. Which of the following is an academic disability?
    a. An attention disorder
    b. A reading disorder
    c. A thinking disability
    d. A memory deficit

24. Which of these is a developmental learning disability?
    a. Emotional disorders
    b. Failure in school
    c. Perceptual disorders
    d. Social disorders

25. A strategy that teachers use with children who are having difficulty learning is to modify the nature of the learning task. In most instances, modification means
    a. acceleration
    b. amplification
    c. simplification
    d. specification

26. Intervention strategies for adolescents who are learning disabled might best focus on
    a. social accommodation and developmental
    b. how to study,learn, and developing social skills
    c. developmental remediation and how to learn
    d. social accommodation and task analysis of curriculum content

27. The term learning disabilities has been used to describe
    a. all different kinds of learning disabilities.
    b. persons who are emotionally disturbed.
    c. persons who are mentally retarded.
    d. persons who are physically handicapped

28. Which of these statements concerning learning disabilities is most accurate?
    a. Learning disabilities are unrelated to academic achievement.
    b. Learning disabilities almost always cause academic underachievement.
    c. Underachieving students are mentally retarded.
    d. Underachieving students are learning disabled.

29. Academic underachievement can be due to either intrinsic conditions or extrinsic conditions. Which of these is an intrinsic condition?
    a. Cultural disadvantage
    b. Economic disadvantage
    c. Genetic damage
    d. Inadequate instruction

30. "Aptitude-achievement discrepancies" are measured by comparing students' scores on
    a. achievement tests and personality test.
    b. attitude tests and intelligence tests.
    c. attitude tests and personality tests.
    d. intelligence tests and achievement tests.

31. Two dimensions to be considered in distinguishing between normal and problem behaviors are
    a. visibility and latency
    b. visibility and depth
    c. intensity and duration
    d. origination and duration

32. Hyperactivity is a(n) _____ disorder.
    a. anxiety
    b. conduct
    c. immaturity
    d. aggression

33. Which of these patterns of behavior is (are) considered maladaptive?
    a. Anxiety-withdrawal
    b. Conduct disorder
    c. Immaturity
    d. All of these

34. Which of these is an example of a first step in a behavior modification program?
    a. Deciding on the positive reinforcement to be used in John's behavior modification program
    b. Deciding on the punishment to be used in John's behavior modification program
    c. Specifying that John is constantly leaving his seat without permission
    d. Making a contract with John

35. In a behavior modification program, what is the purpose of a baseline?
    a. To establish the performance of the student before intervention
    b. To establish the performance of the student during intervention
    c. To establish the performance of the student after intervention
    d. All of these

36. Research indicates that computer-assisted instruction has the potential to help students with attention deficit disorders by
    a. becoming a helping teacher.
    b. helping attention disorders and contributing to improvement in the content areas.
    c. increasing the students' auditory skills.
    d. overcoming learned helplessness and teaching time management skills.

37. Unlike children with other disabilities, people with behavior disorders
    a. are often blamed for their condition.
    b. do not receive special education services.
    c. experience very few conflicts with their parents.
    d. usually make good grades in school.

38. Two critical skills for persons with behavior problems are the ability to overcome learned helplessness and
    a. assertiveness training
    b. cognitive dissonance
    c. self management
    d. self-defense

39. Donna demonstrates an anxious, withdrawn pattern of behavior, and she is an underachiever in school. It is likely that her underachievement is largely due to which of these factors?
    a. Distractibility
    b. Hyperactivity
    c. Immaturity
    d. Low self-esteem

40. Operant conditioning is based on which of the following principles?
    a. Punishment is more effective than positive reinforcement in changing behavior.
    b. Behavior is a function of its consequence.
    c. Spare the rod and spoil the child.
    d. Behavior is a function of intrinsic motivation.

Part III

Directions: Items 41-48 address attitudes toward mainstreaming and handicapped students. Circle the symbol which best represent you opinion of each statement.

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

41. Mainstreaming offers mixed group interaction which will foster understanding and acceptance of differences. SA A U D SD

42. Handicapped students will suffer academically in the regular classroom.	SA	A	U	D	SD
43. Mainstreaming the special student will promote his/her social independence.	SA	A	U	D	SD
44. The integration of special students can be beneficial for regular students.	SA	A	U	D	SD
45. Mainstreaming is likely to have a negative effect on the emotional development of the special needs student.	SA	A	U	D	SD
46. I am capable of effectively teaching mildly handicapped LD and EMH students.	SA	A	U	D	SD
47. Special needs students should be given every opportunity to function in the regular classroom setting.	SA	A	U	D	SD
48. I am capable of effectively teaching mildly handicapped BEH students.	SA	A	U	D	SD

APPENDIX D
OUTLINE OF INSTRUCTION SESSIONS

Saturday, January 27, 1990 Wake Co. Schools System

Time	Topic	Presenter
9:00	Introduction to Workshop Pretest	Debra O. Parker
9:45	Learning & Behavioral Characteristics Test Taking Skills	Dr. Cecelia Steppe Jones, Director of Special Education, NCC University
10:50	Break	
11:00	Continue Characteristics	
12:00	Lunch	
1:15	Behavioral Management Techniques Social Skills	Dr. Steppe-Jones
2:15	Break	
2:25	Instructional Strategies -How does the LD, BEH, & EMH student acquire, retain, and transfer information?	
3:55	Announcements	
4:00	End of Session	

OUTLINE FOR INSTRUCTION - JANUARY 27, 1990

1. Introduction
2. Process of Instruction
3. Definitions
4. Prevalence
5. Causes
6. Overlapping Categories
7. Learning & Behavioral Characteristics
8. Social Skills
9. Following Directions
10. Test-taking Skills
11. Possible reinforcers
12. Behavior Management
13. Principles of Instruction

Saturday, February 3, 1990 Wake Co. Schools System

Time	Topic	Presenter
9:00	Individualizing Instruction -Strategies & Techniques -Adapting Resources	Audrey Langston Secondary Special Ed. Teacher at Harnett Central High School Michelle Clemons Vocational Resource Teacher at Harnett Central High School
10:30	Break	
10:40	Continue Individualizing Instruction	
12:00	Lunch	
1:15	Modifying the Curriculum	Debra O. Parker
2:30	Break	
2:40	Continue Modifying the Curriculum	
3:15	Identifying Resources	
3:30	Posttest Evaluation of Workshop	
4:00	End of Session	

OUTLINE FOR INSTRUCTION SESSION - FEBRUARY 3, 1990

1. Introduction
2. Motivation
3. Review Characterisitcs of Handicapping Conditions
4. The Importance of Individualizing
5. Learning Styles
6. Techniques to Individualize
7. Assess Reading Levels (The Fry)
8. Individualize Materials
9. Interest Inventory
10. Rewards
11. The Special Educator and The Vocational Teacher
12. Modifying the Curriculum
13. Identifying Resources
14. Adapting Resources

APPENDIX E
EVALUATION FORM AND RESULTS OF EVALUATIONS

Participant Evaluation of Instruction Sessions

Item No.	SA	A	U	D	SD	Average Rating
1	11	3	0	0	0	4.8
2	10	4	0	0	0	4.7
3	9	5	0	0	0	4.6
4	9	5	0	0	0	4.6
5	9	5	0	0	0	4.6
6	10	4	0	0	0	4.7
7	9	5	0	0	0	4.6
8	10	4	0	0	0	4.7
9	9	5	0	0	0	4.6
10	9	5	0	0	0	4.6
11	9	5	0	0	0	4.6
12	9	5	0	0	0	4.6
13	9	5	0	0	0	4.6
14	10	4	0	0	0	4.7
15	10	4	0	0	0	4.7
16	10	4	0	0	0	4.7
					Average =	4.7

Note: SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree, SD = Strongly Disagree

Participant Evaluation of Inservice Education Program

Participant Response to, "Overall this inservice education was a successful training experience for me."

Item No.	SA	A	U	D	SD	Average Rating
1	1	0	0	0	0	5.0
2	1	0	0	0	0	5.0
3	1	0	0	0	0	5.0
4	1	0	0	0	0	5.0
5	0	4	0	0	0	4.0
6	1	0	0	0	0	5.0
7	1	0	0	0	0	5.0
8	1	0	0	0	0	5.0
9	1	0	0	0	0	5.0
10	1	0	0	0	0	5.0
11	1	0	0	0	0	5.0
12	1	0	0	0	0	5.0
13	1	0	0	0	0	5.0
14	1	0	0	0	0	5.0
					Average =	4.9

Note: SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree, SD = Strongly Disagree

APPENDIX F
SKILLS CHECKLIST FOR TEACHER OBSERVATIONS

CHECK LIST OF STRATEGIES AND TECHNIQUES FOR TEACHING EXCEPTIONAL CHILDREN

_____ 1. Learn students' names and call them by name.
_____ 2. Establish eye contact.
_____ 3. Show respect for their space.
_____ 4. Talk <u>with</u> students.
_____ 5. Listen attentively when students talk.
_____ 6. Communicate the "why" of things (rationale).
_____ 7. Give students opportunities to express their opinions, desires, interests, goals, etc.
_____ 8. Use interests of students as a springboard for lessons and discussions.
_____ 9. Set up short range goals so that students can see their accomplishments more quickly.
_____ 10. Involve students in activities in which they can be successful.
_____ 11. Provide as much recognition for achievement as possible.
_____ 12. Give positive reinforcement that's honest and sincere.
_____ 13. Do not patronize students.
_____ 14. Work one-on-one with students when necessary and possible.
_____ 15. Build movement into the activities for a class period.
_____ 16. Enlist parental support whenever possible.
_____ 17. Work to establish trust.
_____ 18. Guide students to discover their own values.
_____ 19. Let the students know that you accept them as they are.
_____ 20. Help each student to recognize his/her potential
_____ 21. Vary the manner in which the information is presented. Be sure to match students' learning style and teacher's teaching style as mush as possible.
_____ 22. Vary the manner in which the student is to respond.

_____ 23. Make the physical format of materials attractive, legible, manipulative, uncrowded, age appropriate.

_____ 24. The physical arrangement of the room should accomodate task centers, rows, moving activities and/or stations, limited seating choices.

_____ 25. Grouping and/or paring of students (less able with better or like groups, skill groups, etc.).

_____ 26. Vary the amount of teacher direction. Give clear concise directions with simple or little teacher direction as possible.

_____ 27. Allow for adequate time lapse between question and answer.

_____ 28. Give immediate feedback.

_____ 29. Use appropriate levels of material. Determine the student's level and match the level of task to be considered.

_____ 30. Limit the number of tasks/skills per lesson to suit the attention span.

_____ 31. Limit the complexity and types of tasks.

_____ 32. Vary the length of tasks and the attending time.

_____ 33. Provide an adequate number of practice items (not too many or too few).

_____ 34. Consider the student's interests as sources of motivation.

APPENDIX G
FORMATIVE OBSERVATION DATA INSTRUMENT

Formative Observation Data Instrument

Teacher_____ Class_____
Obs. No._____ Date_____ Length of Observation_____
Announced: Yes___ No___

Practice	Time	Comments
1. **Instructional Time**		
1.1 Materials ready		
1.2 Class started quickly		
1.3 Gets students on task		
1.4 Maintains high time on task		
2. **Student Behavior**		
2.1 Rules-Administrative matters		
2.2 Rules-Verbal participation		
2.3 Rules-Movement		
2.4 Frequently monitors behavior		
2.5 Stops inappropriate behavior		
3. **Instructional Presentation**		
3.1 Begins with review		
3.2 Introduces lesson		
3.3 Speaks fluently		
3.4 Lesson understandable		
3.5 Provides relevant examples		
3.6 High rate of success on task		
3.7 Appropriate level of questions		
3.8 Brisk pace		
3.9 Efficient, smooth transition		
3.10 Assignment clear		
3.11 Summarizes main points		
4. **Instructional Monitoring**		
4.1 Maintains deadlines, standards		
4.2 Circulates to check student performance		
4.3 Use oral, written work products to check progress		
4.4 Questions clearly and one at a time		
5. **Instructional Feedback**		
5.1 Feedback on in-class work		
5.2 Prompt feedback on out-of-class work		
5.3 Affirms correct answer quickly		
5.4 Sustaining feedback on incorrect answers		

6. Facilitating instruction	
6.1 Instructional plan compatible with goals	
6.2 Diagnostic information to develop tasks	
6.3 Maintains accurate records	
6.4 Instructional plan for curriculum alignment	
6.5 Available resources support program	
7. Communicating within the Educational Environment	
7.1 Treats all students fairly	
7.2 Interacts effectively within school and community	
8. Non-Instructional Duties	
8.1 Carries out non-instructional duties	
8.2 Adheres to laws, policies	
8.3 Plan for professional development	

APPENDIX H
ITEMS MISSED ON PRETEST AND POSTTEST

Identification of Items Missed on the Pre and Posttest

Item No.	Section	Item Missed on Pretest	Item Missed on Pretest
* 6	General	8	6
7	General	1	0
8	General	8	0
9	General	8	0
10	General	0	5
11	General	2	2
12	Characteristics	13	0
13	Characteristics	2	1
14	Characteristics	0	2
15	Instruction	0	1
16	Behavior	8	2
17	Behavior	6	0
18	Instruction	3	2
19	Characteristics	14	7
20	Instruction	0	0
*21	Behavior	9	9
22	Characteristics	10	2
23	Instruction	6	1
*24	Instruction	7	8
25	Instruction	4	1
*26	Instruction	11	11
27	Characteristics	1	1
28	Characteristics	3	2
29	Characteristics	2	1
*30	Characteristics	5	4
31	Characteristics	11	3
*32	Characteristics	9	7
33	Characteristics	1	4
34	Behavior	9	5
35	Behavior	8	3
*36	Instruction	8	6
37	Characteristics	2	2
38	Instruction	4	2
39	Instruction	2	1
*40	Behavior	10	8

Note. * Items frequently missed on pre and posttest.