The purpose of the study was to identify unique competencies needed by secondary vocational education teachers to enable handicapped students to achieve occupational success. Specifically, this study was to determine whether secondary special education teachers and secondary vocational education teachers agreed on the importance of competencies currently absent from undergraduate vocational teacher education curricula but are considered necessary for working with vocationally handicapped students. Information provided by this study will be useful in revising the present vocational teacher training program and in designing more appropriate inservice education for secondary vocational education teachers working with the vocationally handicapped student.
Design of the Study

The sample of subjects consisted of sixty-four secondary special education teachers and an equal number of secondary vocational education teachers teaching in the same Oregon schools. On April 30, 1977, a ten-item questionnaire was mailed to the subjects. Each teacher's perspective opinion was sought relative to the importance of each competency in working with the vocationally handicapped special needs student. A second mailing was conducted on May 11, 1977, to those subjects who did not respond to the first mailing. In total, forty-three (sixty-seven percent) of the paired respondents provided usable data.

The treatment of the data was designed to examine the hypotheses that there would be specified significant directional differences between secondary special and vocational education teachers in rating the importance of each competency. The t-test for independent groups was used to test predictions made in the study. Differences were tested using a one-tailed criterion at the .01 significance level.

Findings of the Study

Results of the survey disclosed that secondary special education teachers and secondary vocational education teachers significantly differed \( (t = 2.72, df = 84, p < .01) \) in their rating of competency number six, "Revise Courses in Accordance with Current Occupational Trends." The apparent slightly higher rating of
competency number six by secondary vocational education teachers may be attributed to the emphasis placed on providing vocational education that is realistic in light of manpower needs. The remaining nine competencies were not rated differently by the two participating groups.

**Recommendations**

It is especially recommended that undergraduate teacher education personnel in vocational-technical education consider the findings of this study in terms of incorporating these needed competencies into the curricula. The nature of these competencies lends to infusion into the present curricula. It is also recommended that undergraduate special and vocational teacher education personnel consider appraising the findings of this study in terms of cooperatively clarifying the roles of the vocational and special education teachers in working with handicapped students at the secondary level.
A Study of
Unique Teacher Education Competencies
Needed by Vocational Education Teachers
To Work With Secondary Handicapped Students

by

James Wilmer Kononen

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I. INTRODUCTION

Background of the Problem

In recent years there has been an increased interest in meeting the vocational needs of handicapped students. These students, according to Kay, Kemp, and Saunders (1973), are "... not succeeding or can not be expected to succeed in a regular vocational program" (p. 4). Sipes (1975) reported, "... often these individuals have been isolated from their peers and have been taught 'watered-down' versions of existing courses or have dropped out of school" (p. 1). Furthermore, Sipes (1975) stated, "... typically a large percentage of special education students drop out of school after they reach the age of sixteen" (p. 1). The impact of handicapped students leaving school is portrayed by Edwin Martin (1974), former Acting Deputy Commissioner of Education, Bureau of Education for the Handicapped, as follows:

Each year more than 500,000 handicapped youth leave our schools, but it was estimated in 1969 that only 140,000 of these young persons entering the job market of our society had participated in any type of secondary school age career education program. ... The prospects for that group of handicapped who enter the job market without preparation are grim, both for them as individuals and for society as a whole. Experience tells us that 40 percent will be severely underemployed and subsist at the poverty level, 10 percent will be partially dependent, and 30 percent totally dependent upon society for their existence, sometimes requiring institutional care (p. v).
Sipes (1975) believed that there have always been educators interested in meeting the vocational needs of the handicapped. However, the movement lacked substantial momentum until the advent of the Vocational Education Act of 1963 (P. L. 88-210). The Vocational Education Amendments of 1968 (P. L. 90-576) and of 1976 (P. L. 94-482) added additional impact because they required at least ten percent of the basic state grants to be set aside for the physically, mentally or emotionally handicapped.

In addition, Meers and Bies (1976) felt that the Education for All Handicapped Children Act of 1975 (P. L. 94-142) added further importance to the special needs student because it mandated that all handicapped children be provided a "least restrictive" alternative setting [mainstreaming when appropriate] in all federally funded programs (p. 1). If local or state education agencies do not comply, the law indicated that federal funds may be withdrawn.

In recent years, vocational education has been viewed as particularly important to the handicapped student. For instance, Martin (1975), from the Bureau of Education for the Handicapped in the U. S. Office listed as a major objective to be accomplished by the year 1977 to be that of assuring:

... every handicapped child who leaves school has had career education training that is relevant to the job market, meaningful to his career aspirations and realistic to his highest potential (pp. 154-55).

Although great strides were realized in the development of vocational programs for the special needs students, there existed a great shortage of qualified teachers. Mohamed (1969) indicated,
"Few industrial arts and vocational teachers have formal preparation in special education, hence the majority have difficulty in meeting the needs of the special students in class" (p. 34). Four years later, Kruppa, Hirtz, and Thrower (1973) noted:

... only a few colleges in the nation give attention to fulfilling the needs of providing an undergraduate program for vocational educators working with handicapped students (p. 2).

Clark and Evans (1976) noted that the training of vocational educators equipped to deal with the handicapped student requires more skills than the usual college teacher preparatory program offered, however present conditions exist wherein:

... the increasing diversity of special needs populations in vocational education... obviously requires an increased range of teacher competencies and revised teacher education programs (pp. 220-21).

The lack of qualified vocational education and practical arts teachers to work with special needs students may continue unless efforts are made to determine the competencies to function in such a role.

Statement of the Problem

Little progress has been made in providing the handicapped high school student relevant career education training. According to Brock (1975):

Career preparation for the handicapped student has been left largely to chance with the primary focus being placed upon academic and quasi-academic skills. As a result of inadequate career education programs, many youth have been set adrift in society ill-prepared to meet its social and vocational requirements (p. 1).
Part of the failure to act, according to Clark and Evans (1976), has been due to a lack of a data base on programs and other funded activities. The data collected by Clark and Evans (1976) regarding vocational personnel working with special needs students confirmed that:

a. Handicapped youth are still unserved.
b. State-wide programs are rare.
c. Special projects providing for isolated programs are the most common programming.
d. There are shortages of teachers qualified to work with the handicapped (p. 216).

Possible causative factors are recorded by Brock (1976) as follows:

Teacher training programs in career education for the handicapped are practically non-existent. When they do exist, they are typically a remodeled traditional structure built upon somewhat shaky programs. . . . Needed is a totally new teacher training structure built upon solid foundation – a structure incorporating current thinking and designed for continual renewal (p. 4).

According to Clark and Evans (1976), "Competency-based teacher education has had perhaps a greater emphasis in vocational and special education than in any other educational discipline" (p. 9). Perhaps it was for these reasons that Clark and Evans (1976) also called for a systematic identification of competencies needed by teachers of handicapped youth to establish a teacher preparation model.

To date, most research pertaining to personnel working with special needs students has been conducted by and for special education personnel. The majority of these studies have focused on the
role of the elementary teacher. By way of comparison, studies by vocational educators regarding work with the handicapped students at the secondary level have tended to be scarce, isolated, and too limited in scope. Gold (1976) summarized the need for a comprehensive competency identification study when he stated, "So far as we could determine, this information describing the general competencies needed by personnel is not available in literature" (p. 76). Gold's findings indicated the need for a comprehensive identification study of competencies necessary for vocational education teachers working with special needs students.

Purpose of the Study

The purpose of this study was to identify unique competencies needed by vocational education teachers to enable handicapped students to achieve occupational success. Specifically, this study was to determine whether special education teachers and vocational education teachers agreed on the importance of competencies absent from undergraduate vocational education curricula which were considered necessary for working with vocationally handicapped students.

Significance of the Study

One of the primary impetuses for the interest and emphasis in providing vocational education for the handicapped has been federal legislation. Review of legislation, according to Gallagher (1969), revealed that the emphasis in the 1968 Vocational Education
Amendments was people-oriented rather than occupationally-oriented and this approach fit well with the new emphasis on the handicapped.

One of the purposes of the 1963 Act as viewed by Gordon (1969) was:

... to insure that vocational education was provided for persons who have academic, social, economic or other handicaps that prevent them from succeeding in the regular vocational education programs. Under the 1963 Act they were supposed to have had ready access to vocational education which was of high quality, realistic in the light of actual or anticipated opportunities for gainful employment, and suited to their needs, interests, and ability to benefit from such training. Admission requirements for vocational education were to have been based on ability to succeed in a field of work rather than on academic grades or rank in class. The general curricula was to have been revised to meet the needs of the students (p. 1).

In turn, the need to revise curriculum to provide relevant teacher education programs that enable special needs individuals to cope with change, complexity, and the increasing demands of society is paramount.

Currently there are no special certification requirements for teaching the handicapped students enrolled in a vocational-technical programs other than in the states of New Jersey and Nebraska. Likewise, there are few teacher education programs or courses designed especially for these teachers. Consequently, many vocational education teachers with little or no professional background in the area of teaching handicapped students are employed to teach the handicapped.

Clark and Evans (1976) observed also that:

Special educators at the secondary level have long been free to teach in prevocational and
work-study programs without any certification requirements other than basic special education requirements. Similarly, vocational educators have been free to teach special needs students of any type without specific preparation (p. 218).

Part of the reason for the dual and overlapping roles played by both vocational and special educators may have been that each has not apparently understood who should have been working with the handicapped for specific types of skills.

Perhaps Hehir (1973) lent further insight when he stated:

Some of us in special education are a little too protective of handicapped children. When we are forced into a position where we have to share our expertise with others outside the field, in this case vocational education teachers, we get defensive (p. 662).

The conflict in role expectations may have been due to the fact that special education and vocational education teacher training programs were not clearly defining the competencies associated with each of these roles. Recently, the majority of undergraduate vocational education faculty at Oregon State University identified some important areas that were believed to have been ignored in the Oregon State University curriculum.

To help validate the implications of realigning areas of the college curriculum, it was decided to determine what type of secondary school specialists would benefit most from possible curriculum area revision. This was in keeping with Shearron (1974), who stated, "Teachers should make the final decisions on needed competencies to perform effectively in a school district" (p. 122).
It was beneficial, therefore, to determine the unique competencies needed by vocational education teachers of special needs students. Apparent awareness of this need may have prompted Sheppard (1975) to report:

The Vocational Amendments of 1968 are very specific in relation to earmarking funds for special programs, services, or activities to serve the handicapped or disadvantaged student. It is recognized that vocational educators have a unique contribution to make to the education of these persons. But, while the need for such vocational-technical programs has been expanding the preparation of personnel to staff such programs have not been expanding; therefore, the staff of programs for the disadvantaged and handicapped will not be professionally trained for their responsibilities (p. 1).

This study was done to provide information about the competencies considered needed by vocational education teachers of special needs students. It also was intended to strengthen and lend support to the performance-based movement for teacher preparation (pre- and in-service) as well as high school curricula. Finally, information provided by this study may be useful in revising the present vocational teacher training program and in designing more appropriate inservice education for vocational education teachers when working with the special needs student.

**Definition of Terms**

The following definitions were included for purposes of standardizing the use of terms in the study, other terms or phrases used in the study were considered to be self-explanatory.
Career Education - was defined by Bailey and Stadt (1973) as:

Educational programs and curriculums at many different development levels, and provided by several types of delivery systems, which provide experiences designed to help individuals become oriented to, select, prepare for, enter, become established, and advance in an individually satisfying and productive career. Basic to the concept of career education is the recognition that preparation for a career role must begin in early childhood if the individual is to develop the concepts, attitudes, and skills which insure freedom of choice and expand career options (p. 346-347).

Competency - The specific skill or ability to perform a task, responsibility, or duty directly related to the professional role of the vocational instructor.

Handicapped Persons - The United States Statutes at Large (1968) stated:

"Handicapped persons" means mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, or other health impaired persons who by reason of their handicapping condition cannot succeed in a vocational or consumer and homemaking education program designed for persons without such handicaps, and who for that reason require special educational assistance or a modified vocational or consumer and homemaking program (p. 1071).

Synonym: special needs student, special student, student with special needs.

Special Education - Included special instruction for handicapped children in or in addition to regular classes, special classes, special schools, special services, home instruction and hospital instruction.
Vocational Education - was defined by the United States Statutes at Large (1968) as:

Programs, services, or activities related to vocational or technical training or retraining provided under the Act, the regulations in this part, and the State plan. In this part, anything modified by the adjective "vocational" pertains to "vocational education" as herein defined. Such programs, services, and activities shall include:

1. Vocational instruction meeting the standards and requirements of Section 102.4 of P. L. 90-576:
2. Vocational guidance and counseling meeting the standards and requirements of Section 102.8 of P. L. 90-576:
3. Training of teachers and other vocational education personnel meeting the standards and requirements of Section 102.9 of P. L. 90-576 (p. 1073).

Summary

The need existed to identify those unique competencies needed by secondary vocational education teachers to work with the special needs student. This study was an endeavor to identify those unique competencies. These identified competencies may have potential impact upon Oregon State University undergraduate vocational education personnel preparation programs. It was with this in mind that much of the desire to complete the study was derived.
II. REVIEW OF RELATED LITERATURE

Since the passage of the Vocational Education Act of 1963 (P. L. 88-210) and particularly since the passage of the Vocational Education Amendments of 1968 (P. L. 90-576), an increasing emphasis has been given to providing vocational education programs that meet the needs of the special student. It was the intent of the Vocational Education Amendments of 1968 (P. L. 90-576) that:

Those with special education handicaps . . .

have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training (p. 1070).

Similarly, Kay, Kemp, and Saunders (1973) reported on the challenge of the Amendments:

The Vocational Education Amendments of 1968 present an unlimited challenge for states and their school districts to provide special programs and services to ensure vocational education success for the disadvantaged and the handicapped (p. 1).

Strong (1972) and Macer (1976) viewed the Vocational Education Act of 1963 and the Amendments of 1968 as a landmark decision because they mandated the provision of relevant vocational training in regular vocational programs to students with special needs. Financial stipulations were imposed by the 1968 Amendments to add incentive for the broadening of vocational programs. These financial stipulations required that fifteen percent of basic state grants were to be used for the disadvantaged and ten percent
for the handicapped. The Amendments specifically identified these two populations as special needs. The Vocational Education Amendments of 1976 (P. L. 94-482) further stated that twenty percent of all basic state grants were to be used for the disadvantaged and ten percent for the handicapped.

**The "Least Restrictive" Alternative Setting**

In 1975, an even greater emphasis was given to providing quality education programs for students with special needs through the passage of P. L. 94-142, Education for All Handicapped Children Act. The basic provision called for all states to make free and appropriate public education available to all handicapped learners between the ages of three and eighteen by September, 1978. In 1980, the age range will be expanded to include persons up to twenty-one years of age. Handicapped persons were defined for purposes of P. L. 94-142 as:

... mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, or other health impaired, or children with specific learning disabilities, who by reason thereof require special education and related services (p. 776).

The Education for All Handicapped Children Act of 1975 (P. L. 94-142) further required the assurance of special education services to all handicapped children in the "least restrictive" alternative setting (p. 779). Many school systems nationwide and throughout Oregon are reducing education restrictions on the
special needs students. One approach has been the integration of special needs students into the regular educational setting for a designated portion of each day, often referred to as mainstreaming.

As early as 1974, Chaffin (1974) identified several factors contributing to an emphasis on mainstreaming as an appropriate alternative setting:

1. The results of research of effectiveness of special classes for the mentally retarded.
2. The recognition that many of the diagnostic instruments used for identifying retarded children are culturally biased.
3. The realization that the effects of labeling a child may be more debilitating than the diagnosed handicap.
4. Court litigation related to placement practices and the rights of the handicapped to appropriate education treatment (pp. 1-18).

These arguments were broadened by Martin and Paven (1976) as follows:

1. Homogeneous grouping is undemocratic and affects the self concept of all children adversely by placing a stigma on those in lower groups, while giving other children an inflated sense of their own worth.
2. Most life experiences do not occur in homogeneous settings, and students must learn to work with a wide range of people.
3. Students of lesser ability may profit by learning with those of greater ability.
4. Heterogeneity allows different patterns of abilities and needs to emerge within a group of children.
5. Homogeneous ability grouping may segregate children along sex and ethnic, as well as ability lines (p. 312).

In summary, Roberts (1975) stated that "... the most important reason for mainstreaming is that self-contained special classrooms have not worked best for most mildly handicapped children" (p. 38).
A provision for the "least restrictive" alternative setting for students with special needs as required by P. L. 94-142 has direct implications for vocational programming, according to Phelps and Halloran (1976).

Vocational administrators will be required to design and operate comprehensive services of programming alternatives ranging from self-contained, separate programs to regular vocational programs offering instruction and supportive services on an individual, prescriptive basis. Special scheduling modifications such as extended instructional periods and open-entry/open-exit programs will be essential (p. 37).

Moreover, the process of providing the "least restrictive" alternative setting demands efforts from all those involved in educational planning. In discussing one implementation of the "least restrictive" alternative setting, i.e. mainstreaming, in Oregon, Geren, Rothstrom and Fahey (1976) noted:

Mainstreaming not only necessitates many steps, it also involves many people; handicapped and non-handicapped students, special and regular teachers, pupil support personnel, school principals and other administrators, parents, school boards, teacher training institutions, and the Oregon Department of Education. This is a formidable listing; but when one considers the change that has to take place . . . the list could be extended (p. x).

The long-term effect of mainstreaming in education remains to be seen. Yet, according to Clark and Evans (1976), "Mainstreaming has had, and will continue to have, major impact on vocational and special education" (p. 219). Yang (1975) viewed mainstreaming as a step forward for the handicapped students when he said:

Handicapped children will be strengthened by the experience of mainstreaming and will be prepared to function in a world of normal people after they leave school (p. 13).
The integration of handicapped students into the mainstream of education was viewed by Pucinski (1976) as a positive step in vocational education. He stated, "One solution for dealing with the problems of the handicapped in vocational education is a greater integration of the handicapped in the general school program" (p. 30).

Impact of the "Least Restrictive" Alternative Setting

The success of special needs students receiving vocational training in the regular vocational education program depends largely on the degree of acceptance the policy receives from teachers who have actual or potential involvement in the program. Altfest and Rocco (1975) stated, "Teachers must view each youngster as an individual and discover ways to help each of their students" (p. 15). Altfest and Rocco (1975), Strong (1975), and McNally (1975), suggested a shift in priorities from content-centered programs to student-centered programs. Learning experiences should be based on student's strengths, interests, and aptitudes, not the needs of the school or system, for individualization is essential.

McKinney (1976), Whinfield (1975) and Evans (1976) observed that a wider range of skills and insights [competencies] are needed by vocational educators to work with special needs students than even before. However, as Sheppard (1975) and Pucinski (1976) observed, it was largely because vocational educators lack these competencies that problems were encountered in working with the handicapped student.
Freels (1967), Jones (1971), Macer (1976), Park and Hull (1976) and Adams (1976) believed that all vocational teacher education programs should provide prospective teachers training in special education. Kruppa, Hirtz, and Thrower (1973), Brock (1975) and Clark and Evans (1976) have all noted a need for qualified vocational education teachers to work with handicapped and disadvantaged youth in a variety of programs at the secondary level. Whinfield (1975), stated that:

One basic need is obvious; competent people. But that is too simplistic an answer. The complexity is in how we determine what competencies are needed, and how we get competent people (p. 208).

Vocational Teacher Competence

A review of literature was conducted in an effort to determine if a list of these competencies existed. As Gold (1976) and Clark and Evans (1976) had previously determined, a listing could not be gleened from literature. As a result the most important competencies were selected from the following studies although none of the list could be accepted in toto. The reason for the lack of complete acceptance was examined in the following critique of each study.

The competency checklist, Professional Task Analysis Questionnaire, (Clark and Evans, 1976) was intended to identify the critical components needed in effective vocational special needs programming, but not identify the personnel responsible for these components. Clark and Evans (1976) asked all respondents to
assume the role of a local educational agency professional with whom
he/she was most familiar (e.g., resource room teachers, work coordi-
nators, vocational teachers, counselors, etc.). When rating the
competency, some personnel indicated they had difficulty in assuming
one of these roles.

The forty-nine item Professional Task [Competency] Analysis
Questionnaire was distributed to twenty-six secondary vocational
and special education teachers and administrators and fifty-seven
teacher educators and state office of education personnel. None of
the respondents were randomly selected. Many of the items were
complex, thus the true scores of respondents were not clearly deter-
minal. In summary, Clark and Evans (1976) stated, "Empirical data
are not available which clearly specify the tasks which teachers or
other professionals should perform in order to realize maximum
achievement by special needs students" (p. 140). Although an accept-
able level of consensus on professional tasks [competencies] was not
attained between local education personnel and workshop participants,
they stated, "When done locally or on a statewide basis [a competency
study] is more likely to yield productive outcomes" (p. 141).

In Competencies Needed by Vocational Educators for Teaching
Handicapped Students, Sipes (1975) proposed eighty teaching compe-
tencies for a student in a pre-service vocational teacher education
program with a focus on working with handicapped individuals.
Several competency statements described two or more behaviors. This
diminished the possibility of accurately determining the respondents'
real criterion for rating a particular complex statement.
The scope of the study by Sipes (1975) was confined to data collected from administrators (N = 3), special education teachers (N = 16), and vocational education teachers (N = 22), who participated in one specific 1974 summer project at Central Michigan University. These respondents were not randomly selected and were largely homogeneous in terms of interests.

Sheppard (1975) conducted a descriptive study entitled, *A Survey of Competencies Needed and Inservice Problems of Vocational and Technical Education Teachers Training the Disadvantaged and Handicapped in Virginia*. The purposes of the study were to:

1. Identify the inservice needs and problems encountered by vocational education personnel working with the disadvantaged and/or handicapped,
2. Identify competencies deemed very important, important, slightly important, and unimportant by vocational education personnel working with the disadvantaged and/or handicapped,
3. Identify the types of teaching techniques, resource persons, and/or curriculum materials now being utilized by and helpful to vocational education personnel working with the disadvantaged and/or handicapped,
4. Identify programs and/or experiences which best prepared vocational education personnel participating in this research study for their present positions of working with the disadvantaged and/or handicapped (p. 55).

An eighteen item survey instrument was administered to one hundred eight vocational administrators, teachers and counselors. However, Sheppard categorized all respondents as teachers without giving any reasons for doing so. The respondents, according to Sheppard, were "... vocational educational personnel who had been selected to participate in a graduate course and were recipients of an E. P. D. A. stipend to defray tuition costs" (p. 55).
Only one of the one hundred eight respondents indicated that they primarily taught handicapped students, while twenty-seven indicated they concurrently taught disadvantaged and handicapped students.

The majority of Sheppard's competency statements were complex in nature. This tended to introduce unreliability in responses by subjects. The sample was not randomly selected and the instruments were not properly pilot tested. Only thirty-two of the one hundred eight respondents completed the survey instrument in toto.

Perhaps, due in part to the large number of incompletely completed questionnaire sections, Sheppard (1975) recommended, "Further research needs to be initiated in identifying competencies needed by vocational education personnel working with the disadvantaged and/or handicapped" (p. 65).

The Competencies and Student Performance Criteria For Vocational Educators of the Handicapped, by Brock (1975) has served as the basis for several university special education departments. Two departments in particular were at the University of Oregon and the University of Missouri. These competencies have not been as readily incorporated into vocational education teacher training programs. Perhaps they have been largely rejected by vocational education teacher training programs due to their special education emphasis.

Brock described the intent of the project:

Based upon these and other related findings the staff of the Special Education Project, University of Wisconsin-Stout, proceeded to develop a model program for secondary EMR students and a teacher training model directed to the needs of the students (p. 7).
Another possible reason Brock's (1975) competency list has not been strongly received by vocational teacher educators may have been due to the predominant special education terminology. Since many of these terms and phrases were foreign to vocational educators the receptivity was diminished. Some of the phrases and terms described complex student task behaviors which were rather difficult to implement in the secondary vocational education program. Separation of prevocational and vocational training was less than distinct, which may have been attributed to his task force consisting of special education personnel.

The questionnaire was mailed to two hundred fifty-one secondary teachers of the educable mentally retarded (EMR) and thirty-one randomly selected supervisors in the state of Wisconsin. Brock reported, "The thirty-one teacher competencies were evaluated by the respondents in terms of their ability to meet the needs of the secondary educable mentally retarded students" (p. 7). Later, when examining the competency list in more detail Brock reported:

The competencies are not instructional competencies, in fact, they were not competencies at all. What had been called 'competencies', 'work adjustment', and 'curriculum models' represented vague generalizations difficult or impossible to translate into educational outcomes. The many thousands of dollars spent on research produced some interesting 'findings' but did very little in producing meaningful direction in teacher training (p. 14).
A new director "... set about building an instructional program based upon the research information utilizing a systems approach" (p. 16). Brock stated:

The project staff synthesized research information, professional experience, and plain old 'gut feelings' to develop an idealized role description of a position which should exist in public schools. ... The role of the special educator as conceptualized in this program is that of career education educator, work evaluator, and job coordinator (p. 18).

For the most part, this competency list combined the statements in the earlier list and remained complex in nature. The competencies were also ladened with terminology more familiar to special educators than vocational educators. In that Brock's primary goal was to provide special educators with some vocational competencies and in lieu of the previous considerations, the University of Wisconsin-Stout model was not considered adequately suited to preparing vocational educators with unique competencies to work with the handicapped student.

In *Competencies of Special Education Resource Consultants*, a study by Fafard (1975), thirty competencies considered necessary for special education resource consultants in Oregon were identified. The Delphi method was utilized to elicit competency information from twenty-one special education resource consultants in Oregon. The primary role of the special education consultant was described as:

1. Diagnosing handicapped children.
2. Developing educational programs for handicapped children in school
3. Interpreting and consulting with other school personnel about the educational needs of handicapped children (p. 1).
Three questionnaires were mailed to participants in the spring of 1975. Each respondent was contacted "... by telephone to solicit participation in the project" (p. 3). The first questionnaire solicited statements which were:

1. Sorted according to similarity of skills identified,
2. Clarified in written form to state a single competency only, and
3. Grouped according to the broad skill areas identified by participants (p. 4).

The statements were then forwarded to the same respondents to judgementally rate the "level of importance of each competency" and the "primary means of utilization of each competency" (p. 2).

The third questionnaire requested respondents to select the source they felt was most appropriate for developing each competency. Respondents felt that "knowledge of competencies" would be more appropriately developed in teacher training programs but "abilities competency" development was felt to be more aptly provided by actual work experience (p. 12).

Again, each competency statement required the rating of two or more behaviors or very general statements. The significance of the study was further diminished by the sample size of twenty-one respondents, which probably prevented the information from being representative and easily generalized.

In Development and Utilization of Special Vocational Needs Teacher Competencies, Meers and Bies (1976) developed a list of major competencies, which were followed by ninety-four sub-competencies "... that contribute to the overall preparatory"
of a vocational education teacher for working with special needs student (p. 5). In addition eight additional unique competencies were identified, which "required special instructional effort" (p. 13).

The competency identification process as described seemed very adequate. However, all statistical data were omitted. The absence of all statistical data made it impossible to determine the instrument's reliability and validity.

There also appeared to be some duplication of competencies in the list. One item, for example, was an ability to "Recognize and evaluate special instructional problems associated with different rates of human development," while another was to "Recognize special instructional problems associated with different rates of development."

Another example was the joint listing of "Adapt the physical and instructional environment for specific students within the sensory, physical, emotional, and social states in light of information gained from teachers, physicians, and noninstructional consultants," with "Adapt instructional environment for specific children in the light of information gained from physicians, and other noninstructional consultants." For the most part each competency defined more than one behavior.

In Professional Education Competencies of Secondary Vocational Instructors, Courtney and Haflin (1971), endeavored to determine the common training needs and requirements of secondary level
vocational education teachers. One hundred fifty respondents represented vocational education teachers who were randomly chosen from the five vocational disciplines. The respondents rated the proficiency required for each of the one hundred thirty items. The factor analysis indicated that the items tended to cluster into common groupings. The groupings were felt to logically formulate the basis for organizing instructional programs for the training of secondary vocational teachers.

Items in the Special Program Development sub-group "... stood out with its low means" (p. 10). In fact, the two lowest rated items were "Provide special education training for the mentally handicapped" and "Provide special education training for the physically handicapped" (p. 12). These were the only two items in the study which made reference to the handicapped.

Summary

Only one study, Courtney and Haflin (1971), randomly selected respondents and seemed to avoid complex questions. However, the Courtney and Haflin (1971) study contained only two items pertaining to the special needs student. These were the two lowest rated items of their study. In addition, their study was designed to determine only the competencies needed by secondary vocational teachers. The remaining studies (Sipes, 1975: Brock, 1975: Sheppard, 1975: Clark and Evans, 1976: Meers and Bies, 1976: and Fafard, 1975) did not randomly select respondents, and fifty percent to ninety-eight
percent of the items across all studies had complex themes. In addition, some items were unnecessarily difficult to understand because of stereotyped words or phraseology.

Failure to randomize items, to write items with a central theme, and the use of unique terminology prohibited adopting any of the mentioned instruments in toto for this study. Instead, only the most important items listed in each of the seven forementioned studies were considered for inclusion in this study. These one hundred four items were rewritten and condensed into thirty statements. To determine curriculum areas in need of possible revision, undergraduate vocational teacher educators were asked to rate the thirty competencies as follows:

1. Competency is presently being met in the undergraduate program and should continue to be incorporated into the undergraduate program.

2. Competency is NOT being met but should be incorporated into the undergraduate program.

3. Competency is presently being met but should NOT be incorporated into the undergraduate program.

4. Competency is NOT being met and it should NOT be incorporated into the undergraduate program.

At least five of eight Oregon State University's vocational teacher educators felt that the following ten statements should be met but were not being met in the undergraduate vocational teacher education curricula. The statements were:

1. Aid student in establishing instructional objectives that are achievable in terms of their handicap.

2. Use appropriate methods of evaluation to determine special needs students' vocational progress.
3. Select instructional materials to accommodate the individual needs of the special student.

4. Adapt vocational education facilities for special needs students.

5. Adapt vocational educational instructional materials for special needs students.

6. Revise courses in accordance with current occupational trends.

7. Be able to state the side effects of drugs taken by students.


9. Specify vocational training goals important to the individual special needs student.

10. Conduct safety inspections.

The assumption was made that the opinions of these experts would be aligned with current research. It was also felt that the curriculum areas identified by the University undergraduate faculty could serve as the framework within which curriculum revisions should be implemented. The curriculum areas under consideration were then rated by persons in the field in order to validate the list.

Two distinct groups of secondary teachers were used to assess the importance of various competencies for working with the handicapped student: special education teachers and vocational education teachers. Special education teachers were primarily used as a comparison group. It was felt that their training and experience in working with the handicapped student provided adequate rationale for inclusion in the study. It was also believed that the
inclusion of the competency ratings of this group, when compared to the competency ratings of vocational education teachers, would have strong implications for curriculum design at the undergraduate vocational education teacher training level. At the same time it would help to determine and distinguish situational role expectations. Aligning undergraduate teacher training curriculum with perceived role demands was believed to improve teacher effectiveness, as observed in the review of literature.

**Competency Number Two:** Use appropriate methods of evaluation to determine special needs students' vocational progress.

To "Evaluate teaching effectiveness [vocational education] through student achievement" (p. 11) was one of the highest ranked competencies in Courtney and Haflin's (1971) study. Their study was proposed to determine the proficiency which secondary vocational education teachers felt that their job required. Brock (1975) and Clark and Evans (1976) observed that special education teachers felt they were inadequately prepared to teach handicapped students skills and behaviors needed for work-related tasks. Consequently, this researcher hypothesized that secondary vocational education teachers would rate competency number two higher than would secondary special education teachers.

**Competency Number One:** Aid student in establishing instructional objectives that are achievable in terms of their handicap.

**Competency Number Three:** Select instructional materials to accommodate the individual needs of the special student.
Competency Number Five: Adapt vocational education instructional materials for special needs student.

Competency Number Nine: Specify vocational training goals important to the individual special needs student.

The two lowest rated items in Courtney and Haflin's (1971) vocational education study had handicapped themes. Similarly, Baltimore (1972) reported that "Plan a special curriculum (vocational education) for the disadvantaged and handicapped" (p. 106) ranked ninety-three in his ninety-eight item questionnaire. A Study of the Career Education Competencies Considered Needed by Elementary and Junior High School Teachers in Selected Schools in Oregon by Holloway (1972) failed to list any competencies which had a handicapped theme. These findings do not appear to be atypical of vocational education literature. On the other hand, classical special education textbooks abounded with suggestions on ways to align instructional objectives to meet the needs of the handicapped student (Dunn, 1973; Kirk, 1972; Robinson and Robinson, 1976). This apparent philosophical polarity led this investigator to hypothesize that secondary special education teachers mean score rating of competencies numbers one, three, five and nine would be larger than the mean score rating of secondary vocational education teachers.

Competency Number Ten: Conduct Safety Inspections.

"Maintain a clean, orderly laboratory or classroom" (p. 91) was a highly ranked competency in both the Spaziani (1972) and Courtney and Haflin (1971) studies. "Interpret the legal
responsibilities of vocational teachers" (p. 109) was a competency included in Baltimore's (1972) vocational education study. The frequent references to laboratory or shop safety in vocational education literature as compared to the apparent absence of references to laboratory or shop safety in special education literature largely provided the rationale to predict that secondary vocational education teachers would rate competency number ten higher than would secondary special education teachers.

**Competency Number Seven:** State the side effects of drugs taken by students.

Dunn (1973), in reference to students experiencing various degrees of epilepsy, cautioned teachers to be aware of important problems in education and adjustment that these students must encounter. He related that the medication often results in lack of concentration, drowsiness, and/or lack of coordination which may hinder school work. He added:

... there is no reason why the child with epilepsy cannot function in regular classrooms. Teachers should be aware of any possible difficulties either in the accomplishments of school tasks or in relations with their peers and adults and be ready to help the child meet these problems successfully (p. 476).

Robinson and Robinson (1976) in discussing drugs in more general terms, informed teachers, "A drug which works well for one child may simply increase the problems of another. Dosages must be individually calibrated and adjusted from time to time" (p. 233). The need to monitor students' drug programs is exemplified by Sulzbacher (1973), who noted that one must be careful in evaluating
a drug program to insure that severe decreases in desired behaviors do not accompany decreases in undesired behaviors. Robinson and Robinson (1976) added that teachers may record an improvement in student behavior while the student is administered drugs but this may merely reflect an oversedation.

Additional reasons for monitoring student medication plans were provided by Gearheart (1972) who strongly advised:

Teachers should be aware of the medication being administered and report any deviation in behavior to the physician. Correct dosage demands continued observation, since each child may react differently to a drug (p. 237).

Those authorities concerned with drugs and drug dosages and their effect on educational performance were identified exclusively as special education experts.

It was discovered that vocational education literature failed to mention the need to know the side effects of drugs or medications taken by students.

The numerous special education references to the monitoring of medication and the apparent inattention in vocational education literature to this matter inclined this investigator to hypothesize that secondary special education teachers would rate competency number seven higher than would secondary vocational education teachers.

**Competency Number Six:** Revise courses in accordance with current occupational trends.

**Competency Number Eight:** Determine performance standards on jobs.
Courtney and Haflin's (1971) study found "Break down an occupation or job into its component parts for instructional purposes" (p. 14), "Conducting community surveys for purposes of improving instruction" (p. 15), and "Conduct periodic updating of the course of study in accordance with recent occupational trends" (p. 12) highly related to the secondary vocational teacher's job in the field. Special education literature and research failed to indicate the need for special educators to perform any of the above competencies. This was probably related to special educators generally possessing an inadequate knowledge of work related tasks in addition to having easy access to existent modified curricula. As a result, this investigator hypothesized that secondary vocational education teachers would rate competencies number six and eight higher than would secondary special education teachers.

Competency Number Four: Adapt vocational education facilities for special needs students.

"Know the special state requirements for vocational facilities" (p. 15) and "Know the special state requirement for vocational shops and laboratories" (p. 17) were regarded as being related to the vocational teacher's job in the field by Courtney and Haflin (1971). "Interpret the state requirements for vocational education facilities" (p. 78) was ranked sixty-sixth in a ninety-eight item questionnaire by public school district vocational education leaders, according to Baltimore (1972). Recent special education text books failed to list the need to modify vocational education facilities as a competency needed by
special educators (Dunn, 1973; Kirk, 1972; Robinson and Robinson, 1976). This was more understandable in view of the findings by Brock (1975) and by Clark and Evans (1976) that special educators felt inadequately prepared to instruct job-related tasks. This investigator thereby hypothesized that secondary vocational education teachers would more highly rate competency number four than would secondary special education teachers.

Summary

Review of literature indicated that competencies needed by vocational educators when working with special needs students were not adequately met in teacher training programs. This was confirmed by the Oregon State University undergraduate vocational education faculty members. Furthermore, literature suggested that some competencies should be the responsibility of special education teachers and some should be the responsibility of the vocational education teachers. Clarification of the role distinctions was the purpose of this study.
III. DESIGN OF THE STUDY

The sections presented in this chapter describe the preparation of the instrument, population and sample, the statistical design, and collection of the data used in this study.

**Preparation of the Instrument**

To meet the objectives of the study it was necessary to develop a list of competencies for vocational education teachers of students having special education needs. Several lists were considered. However, it was felt that none were appropriate in their present form. It was therefore decided to develop a list of teaching competencies based on the collation of what was felt to be the best of what could be found in literature. Only the highest rated competencies from each list were included in this study.

*The Professional Tasks [Competencies] for Special Needs Personnel* by Clark and Evans (1976) appeared to be the most comprehensive set of competencies from which to begin. The basic headings from Clark and Evans (1976) study were utilized to initially categorize competencies.

To complete the list of one hundred four competencies, other competencies were extracted from lists by University of Wisconsin-Stout (Brock, 1975), University of Oregon (Fafard, 1976), University of Nebraska (Meers & Bies, 1976), University of Virginia (Sheppard, 1975), Wayne State University (Sipes, 1975), and Oregon State University (Courtney & Haflin, 1971). The categorized one hundred
four competencies are listed in Appendix A. The one hundred four competencies were reduced to thirty competencies by grouping the competencies in terms of content and rewriting them when necessary to clarify their meaning. These thirty competencies were submitted to a refinement committee consisting of eight Oregon State University undergraduate vocational teacher educators. Five or more vocational teacher educators indicated that ten of the competencies were presently not being met but should be met in the undergraduate vocational teacher training program. A copy of the instrument is provided in Appendix B.

The ten item questionnaire was then field tested. Five secondary special education teachers and five secondary vocational education teachers were asked to complete the questionnaire in order to gain insight into problems that might arise during self-administration by the study's respondents. Field test respondents were asked to complete the questionnaire, identify instructions and competencies difficult to interpret, and list their recommendations for revisions. Following the field testing phases, necessary revisions were made prior to preparing the final draft. The final survey instrument was then developed with a listing of ten teaching competencies which were believed to be essential for vocational education teachers working with the special needs students.

The instrument was designed to elicit one response for each competency. The response called for respondents to check judgmentally the importance of the competency as hypothetically performed by the respondent with the handicapped student. The responses were
recorded on a twenty-point rating scale. Response values ranged from a low of one to a high of twenty. A copy of the instrument is provided in Appendix C.

**Population and Sample**

For the purposes of this study, two distinct populations in Oregon were used. The populations were (1) sixty-four high school special education teachers; and (2) approximately fifteen hundred high school vocational education teachers. All secondary special education teachers in Oregon were included in the study. An equal number of vocational education teachers were selected to participate in this study. Each special education teacher was "matched" with a vocational education teacher employed in the same Oregon school. Since there were more than one vocational education teacher in each of the schools they were randomly selected using a table of random numbers.

**Collection of the Data**

On April 30, 1977, sixty-four special education teachers and sixty-four vocational education teachers were mailed the survey instrument, as presented in Appendix C. The survey instrument was pre-stamped and self-addressed for returning. The survey instrument was printed on yellow and beige paper and sent to special education teachers and vocational education teachers respectively. A personalized cover letter (illustrated in Appendix D) was included in the mailing in an effort to produce a higher response rate, as suggested by Oppenheim (1966). The cover letter briefly stated the purpose of
the study and requested the cooperation and response of the individual.

In an effort to increase the total response rate, a second mailing was conducted on May 11, 1977, to those subjects who failed to respond to the first mailing. The second mailing included a follow-up letter (Appendix E) and a second copy of the survey instrument. The instrument was pre-stamped and self-addressed for returning. Each instrument was coded with a respondent identification number for purposes of follow-up on those not responding. Precautions were taken for the protection of human subjects. No names were requested on the instrument. To avoid possible seizure and matching of codes, the list of participants was kept in one file and addresses and codes in another file. A meaningless code was used and the lists were destroyed after the data were collected. The final step was to check and code each returned questionnaire before transferring the information to data processing cards for analysis. A total of fifty-two (eighty-one percent) secondary vocational education teachers and fifty-four (eighty-four percent) secondary special education teachers returned the survey instrument by May 17, 1977, the cut-off date. Forty-three (sixty-seven percent) matched pairs of special and vocational education teachers provided usable data for this study.

The Statistical Design

The central problem of this study was to determine the competencies needed by secondary vocational education teachers
to effectively work with special needs students. The *t*-test for independent groups was used to test predictions made in Chapter II. Differences were tested using a one-tailed criterion. The significance level used was .01. The facilities and resources of the Oregon State University Computer Center were used to compile the numerical data collected through the instrument.

**Summary**

A ten item mail-administered instrument was developed through the use of a four step modified goal analysis technique (Mager, 1972). The instrument was submitted to sixty-four secondary special education teachers and to sixty-four vocational education teachers in Oregon. The teachers' opinions were sought relative to the importance of each item in working effectively with the handicapped special needs student in a vocational program. The *t*-test for independent groups was used for the analysis of data.
IV. FINDINGS

This chapter presents the findings of the ten hypotheses cited in Chapter II. Chapter III contained the detailed procedures and statistical techniques used to conduct the study. In order to test the hypotheses, t-tests for independent groups were used.

Findings Related to the Hypotheses Under Investigation

The survey results disclosed (Table 1) that secondary special education teachers and secondary vocational education teachers significantly differed ($t = 2.72, df = 84, P<.01$) in their ratings of competency number six, "Revise courses in accordance with current occupational trends." The means and standard deviations of teachers' ratings of competency number six are displayed in Table 2.

The relative importance placed on occupational requirements by vocational educators was verified as predicted in Chapter III. Secondary special education teachers and secondary vocational education teachers who have had experience with handicapped special needs students did not significantly differ ($t = 1.83, df = 69, n.s.$) in their rating of competency number six, as shown in Table 2. Therefore, the significant difference found may have been due to the higher rating of item number six by the vocational education teachers with no experience with handicapped special needs students. The remaining nine competencies were not rated significantly different by the two participating groups, as displayed in Table 1.
Table 1
Mean, Standard Deviation, Range, and t of Responses
by Secondary Special Education Teachers (N = 43) and Vocational Education Teachers (N = 43) on Ten Unique Teacher Competencies

<table>
<thead>
<tr>
<th>Item</th>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Special Education Teachers</td>
<td>17.6279</td>
<td>4.226</td>
<td>1 - 20</td>
</tr>
<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>18.3256</td>
<td>2.265</td>
<td>10 - 20</td>
</tr>
<tr>
<td>2</td>
<td>Special Education Teachers</td>
<td>17.5349</td>
<td>3.906</td>
<td>4 - 20</td>
</tr>
<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>17.4651</td>
<td>3.019</td>
<td>9 - 20</td>
</tr>
<tr>
<td>3</td>
<td>Special Education Teachers</td>
<td>18.5581</td>
<td>3.912</td>
<td>1 - 20</td>
</tr>
<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>17.6512</td>
<td>3.999</td>
<td>1 - 20</td>
</tr>
<tr>
<td>4</td>
<td>Special Education Teachers</td>
<td>16.3953</td>
<td>4.681</td>
<td>1 - 20</td>
</tr>
<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>14.6047</td>
<td>5.095</td>
<td>1 - 20</td>
</tr>
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</table>

(Continued on next page)
<table>
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<tr>
<th>Item</th>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
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<tr>
<td>5</td>
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<td>17.4419</td>
<td>4.222</td>
<td>5 - 20</td>
<td>1.26</td>
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<td></td>
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<td>16.2558</td>
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<td>6 - 20</td>
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<tr>
<td>6</td>
<td>Special Education Teachers</td>
<td>15.3256</td>
<td>5.022</td>
<td>1 - 20</td>
<td>2.72*</td>
</tr>
<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>17.7674</td>
<td>3.063</td>
<td>8 - 20</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Special Education Teachers</td>
<td>12.1860</td>
<td>5.787</td>
<td>1 - 20</td>
<td>-1.04</td>
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<tr>
<td></td>
<td>Vocational Education Teachers</td>
<td>13.4651</td>
<td>5.663</td>
<td>1 - 20</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Special Education Teachers</td>
<td>16.6744</td>
<td>3.727</td>
<td>6 - 20</td>
<td>-.48</td>
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<td></td>
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<td>16.2791</td>
<td>3.966</td>
<td>4 - 20</td>
<td></td>
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<tr>
<td>9</td>
<td>Special Education Teachers</td>
<td>17.4186</td>
<td>3.768</td>
<td>3 - 20</td>
<td>1.13</td>
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<td></td>
<td>Vocational Education Teachers</td>
<td>16.7674</td>
<td>4.005</td>
<td>4 - 20</td>
<td></td>
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<tr>
<td>10</td>
<td>Special Education Teachers</td>
<td>14.2093</td>
<td>5.800</td>
<td>1 - 20</td>
<td>1.06</td>
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<td>15.4651</td>
<td>5.216</td>
<td>1 - 20</td>
<td></td>
</tr>
</tbody>
</table>

*p .01
Table 2

Mean and Standard Deviation of Responses by Special Education and Vocational Education Teachers who had Experience with Handicapped Students and did not have Experience with Handicapped Students (Item Number Six).

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Number</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Education (all with experience)</td>
<td>43</td>
<td>15.33</td>
<td>5.02</td>
</tr>
<tr>
<td>Vocational Education with Experience</td>
<td>29</td>
<td>17.17</td>
<td>3.39</td>
</tr>
<tr>
<td>Vocational Education without Experience</td>
<td>14</td>
<td>19.00</td>
<td>1.75</td>
</tr>
</tbody>
</table>
It was felt that this harmony in rating was partially reflective of the recent increased contact vocational education teachers have had with handicapped students. This increased contact has been, for the most part, the result of the "least restrictive" alternative setting mandated by recent national and state legislation. On the other hand, secondary special education work study programs have increased in number the past five years. These events have apparently increased each of these teaching group's awareness of the vocational needs of handicapped students. Likewise, the harmony in rating may reflect the teacher's belief that to serve the handicapped adequately, a broad range of services must be provided by public and private agencies. Further consideration of these results follows in the next chapter.
V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of the study was to identify unique competencies needed by secondary vocational education teachers to enable handicapped students to achieve occupational success. Specifically, this study was to determine whether secondary special education teachers and secondary vocational education teachers agreed on the importance of competencies currently absent from college undergraduate vocational education curricula which were considered necessary for working with vocationally handicapped students.

To meet the objectives of the study, it was necessary to develop a list of competencies for assessing personnel working with students who have special vocational education handicaps. Several previously developed listings were considered. However, it was felt that none were appropriate in their present form. It was therefore decided to develop a list of teaching competencies based on the collation of what was felt to be the best that could be found in literature. Only the highest rated competencies from earlier lists were included in this study.

The listings of Professional Tasks [Competencies] for Special Needs Personnel by Clark and Evans (1976) appeared to be the most comprehensive set of competencies from which to begin. The basic headings from the Clark and Evans (1976) study were used to initially categorize competencies.

To complete the list of one hundred four competencies, other
competencies were extracted from lists by the University of Wisconsin-Stout (Brock, 1975), University of Oregon (Fafard, 1976), University of Nebraska (Meers and Bies, 1976), University of Virginia (Sheppard, 1975), Wayne State University (Sipes, 1975), and Oregon State University (Courtney and Haflin, 1971). The categorized one hundred four competencies were reduced to thirty competencies by grouping the competencies in terms of content and rewriting them when necessary to clarify their meaning. To determine curriculum areas in need of possible revision, eight undergraduate vocational teacher educators were asked to rate the thirty competencies as follows:

1. Competency is presently being met in the undergraduate program and should continue to be incorporated into the undergraduate program.
2. Competency is NOT being met but should be incorporated into the undergraduate program.
3. Competency is presently being met but should NOT be incorporated into the undergraduate program.
4. Competency is NOT being met and it should NOT be incorporated into the undergraduate program.

Five or more undergraduate vocational teacher educators indicated that ten of the competencies were presently not being met but should be met in the undergraduate vocational education teacher training program.

Once these data were obtained from the undergraduate vocational education faculty, the initial questionnaire was constructed. The questionnaire, which asked respondents to rate the importance of these ten items, was then field tested. Five secondary special
education teachers and five secondary vocational education teachers were asked to complete the questionnaire in order to gain insight into problems that might arise during self-administration by the study's respondents. Specifically, field test respondents were asked to complete the questionnaire, identify instructions and competencies difficult to interpret, and list their recommendations for revisions. Following the field testing phase, necessary revisions were made prior to preparing the final draft. The final survey instrument was then developed with a listings of ten teaching competencies which were believed to be essential for vocational education teachers working with the special needs students.

The instrument was designed to elicit one response for each competency. The response called for respondents to check judgmentally the importance of the competency as hypothetically performed by the respondents with the handicapped student. The responses were recorded on a twenty-point rating scale. Values of response options ranged from a hypothetical low of one to a high of twenty.

Sixty-four secondary special education teachers and sixty-four secondary vocational education teachers in Oregon were asked to rate this series of behaviorally stated competencies. Every special education teacher employed in a high school in Oregon was invited to respond to the questionnaire. Each special education teacher was matched with a vocational education teacher randomly selected from the same high school.

Forty-three (sixty-seven percent) matched pairs of special and vocational educators responded to the questionnaire. Results of the
survey disclosed that competency number six, "Revise courses in accordance with current occupational trends," was rated significantly different by the two groups of respondents. The apparent slightly higher rating in competency number six by vocational educators may have been attributed to the emphasis placed on providing vocational education that is realistic in light of manpower needs. An alternative, albeit more pessimistic, explanation for this observed difference may be that vocational education teachers without experience naively assumed that specific job skills were more important than general vocational preparation.

The other nine competencies were viewed similarly by both special and vocational education teachers as being important when working with handicapped students. It appeared that recent legislation may have increased the awareness of vocational education teachers to the special needs of the handicapped learner.

Conclusions

Secondary special education teachers and vocational education teachers in the field did not disagree with the undergraduate vocational education faculty that these ten competencies were important in preparing the handicapped for the world of work. Nine of the competencies were not rated significantly different by the two types of respondent groups. Competency number six, "Revise courses in accordance with current occupational trends," was rated significantly different by the two groups of participants.
Recommendations for Program Development

It is especially recommended that undergraduate vocational teacher education personnel critically analyze the findings of this study in terms of incorporating these competencies into the curricula. The nature of these competencies lends to infusion into the present curricula. Furthermore, it is recommended that undergraduate special and vocational teacher education personnel analyze the findings of this study in terms of cooperatively clarifying the role of the special and vocational education teacher at the secondary level. Perhaps vocational education teachers should be enrolled in some special education courses and special education teachers should take some vocational education courses.

Recommendations for Further Research

Research is needed to identify pre-vocational teaching competencies for educators to effectively work with the handicapped. This study focused on schools in which both secondary vocational and special education teachers were employed. Further research is needed on schools in which only one of the types of specialists is employed. In the absence of a vocational educator in the school to meet the vocational needs of the handicapped student, the less experienced teacher's perceived importance of facilitative vocational skills might be lower. Another related area that needs to be pursued is the degree to which vocational education teachers are student oriented as compared to other subject area teachers.
Replications of this study should be made in different parts of the country. The data might reflect philosophical differences in terms of occupational expectations and manpower needs for which the handicapped are prepared as a result of vocations common to the local industry. Also, literature revealed that various parts of the country place greater or lesser emphasis on providing the "least restrictive" alternative setting for special needs students. The rating of the ten competencies may reflect these regional differences. The resultant data should be compared and combined with the information yielded from the study conducted by Meers and Bies (1976) and from this study.

In addition to studying the variables included in this study, the effect of other factors such as age of teachers, personality of teachers, years of teaching experience, methods for classifying exceptional students in vocational programs, or the number of credit hours special education teachers have taken in vocational education and vocational education teachers have taken in special education should be investigated.

Continued efforts should be made to design and/or refine test instruments for studying the potential impact of teacher competencies on vocational education.
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APPENDIX A

LIST OF ONE HUNDRED FOUR CATEGORIZED COMPETENCIES
ASSESSING PROGRAM AND LEARNER NEEDS

1. Develop a rationale, program goals, and philosophy for a special needs program.

2. Analyze the local job market, economic factors in the community, job security and working conditions in several different job settings, community attitudes, and services of community support (economic, personal, recreational, etc.).

3. Analyze local or regional job market for employment trends.

4. Identify occupations and clusters of occupations.

5. Analyze occupational/career clusters to determine relevant instructional content (competencies needed in the world of work).

6. Have practical experiences via internships, externships, and student teaching or the like in preparation for teaching the disadvantaged and handicapped student.

7. Possess knowledge of the characteristics of the disadvantaged and handicapped student.

8. Knowledge and utilization of effective interpersonal communication techniques.

9. Know how to relate to people--regardless of socio-economic level, race, color, or sex.

10. Possess an interest in and enthusiasm for working with the disadvantaged and handicapped students.

11. Select students for VEH project, including initial screening of the total school district population and follow-up evaluation resulting in selection of students to be served.

12. Identify and utilize techniques of diagnosing learning problems and needs of disadvantaged and handicapped students.

13. Selecting, using, and interpreting appropriate diagnostic tools and data collecting procedure.

14. Assess the cognitive performance of special needs learners.

15. Knowledge of prescriptive techniques.
16. Analyze students' occupational aptitudes, occupational liabilities, academic strengths and weaknesses, personal ambitions, and occupational expectancies.

17. Analyze students' occupational interests and aptitudes.

18. Identify educational and behavioral goals in terms of student's handicap and disadvantage.

19. Assist students in understanding his/her limitations.

20. Assist students in defining goals and objectives that are achievable in terms of his/her special limitations.


22. Utilize behavior management procedures in analyzing vocational problems of students and improving students' vocational skills.

23. Collaborate with other educators, specialists, and parents in evaluating the learner's educational needs.

24. Aid parents of special needs students in defining realistic goals for their children.

25. Aid parents in defining realistic goals for their children.

26. Identify health problems of the disadvantaged and handicapped students and refer student to the appropriate persons.

27. Refer special needs students to qualified personnel agencies and/or provide appropriate occupational and educational information.

28. Refer students to qualified personnel agencies when necessary.

**PLAN INSTRUCTION**

1. Develop individual student goals to be done cooperatively by teacher and student based on all the information gathered.

2. Develop student programming, done cooperatively by teacher and student, resulting in a written plan to achieve the student goals during the course of the career-oriented special program.

3. Develop a career-oriented special education program compatible with school procedures and regulations, and obtain administrative approval of the program.

4. Develop academic skills through vocational programs.
5. Develop instructional materials to meet specific student needs.

6. Planning and writing perscriptive programs.

7. Plan a sequence of modules or units of instruction according to the learner's needs.

8. Plan occupational experience programs and/or laboratory experiences for disadvantaged and handicapped students.

9. Select instructional materials and methods to accommodate student performance level.

10. Sequence tasks to conform with learning styles, learning pace, and inferred learning potential of learners.

11. Adapt the physical and instructional environment for specific students within the sensory, physical, emotional, and social states in light of information gained from teachers, physicians, and noninstructional consultants.

12. Coordinate with instructional planning in academic areas for students with learning problems (reading, math, and other academic areas required for graduation).

13. Effectively build a series of educational experiences which would lead a student to a better understanding of:
   - self awareness
   - career awareness
   - career exploration
   - career decision making

14. Develop, implement, and promote a career-oriented special program in a local community.

15. Be creative in developing methods and techniques.

16. Develop, utilize, and evaluate procedures for communicating with parents. At each stage of the student's program, concerning goals and objectives of the program as well as student programs.

17. Select textbooks and instructional materials for the classroom, shop or laboratory.

18. Select appropriate equipment and supplies for instructional purposes.

19. Select instructional materials for the classroom.
IMPLEMENTING INSTRUCTION

1. Provide opportunities for students to achieve recognition and receive personal group approval.

2. Provide success-producing situations for individual students.

3. Identify, evaluate, and utilize instructional materials appropriate for disadvantaged and handicapped students.

4. Identify and utilize appropriate teaching methods especially successful with disadvantaged and handicapped students.

5. Utilize appropriate teaching strategies, techniques, and alternatives for classroom and individual needs.

6. Use instructional techniques that individualize instruction (e.g., peer instruction, small group instruction, or programmed instruction).

7. Vary and pace instructional activities to maintain high student interest.

8. Carry on instructional planning in academically troubled students (reading, written language, oral language, social studies, mathematics, and other academic areas required for high school graduation).

9. Organize and use a "buddy-system" for special needs learners.

10. Encourage students to express their ideas and opinions.

11. Assist students in expressing their feelings.

12. Manage discipline problems that may develop in working with disadvantaged and handicapped students.

13. Identify and manage students with mental and emotional disorders.

14. Specify and control change of problem behaviors in the classroom through the use of behavior management techniques.

15. Identify and control problem behaviors in the classroom using behavioral management techniques.

16. Be sensitive to and utilize behavior modification and other adjustment approaches.
17. Execute emergency procedures in a calming manner in the event of seizure, fatigue, or excessive emotional reaction.

18. Utilize guidance and counseling practices appropriate for working with disadvantaged and handicapped students.

19. Provide personal counseling.

20. Establish and build rapport with the student.

21. Aid student in establishing goals and instructional objectives that are achievable in terms of his handicap.

22. Aid student in adjusting to his disability.

23. Maintain discipline in the shop or laboratory.

24. Maintain discipline in the classroom.

25. Maintain attention during the presentation of classroom lessons.

26. Be stimulating in your work as a teacher.

27. Use questions during classroom presentations to aid student learning.

28. Use questions during demonstrations to aid student learning.

29. Make a shop or laboratory demonstration meaningful to the individual.

30. Make a classroom lesson meaningful to the individual student.

31. Consult with other teachers to facilitate adequate performance of students in classes outside of the career-oriented special program.

32. Consult with secondary teachers to facilitate adequate performance of students in classes outside of the career-oriented special program.

33. Consult with supportive teacher(s) in order to extend and implement programs for individual students.

34. Develop and use simulated job application and interview procedures.

35. Develop, utilize, and evaluate job samples designed to teach specific occupational skills.
36. Develop and utilize mock job application and interview procedures and evaluate student performance in these simulated conditions.

37. Identify, establish, and maintain part-time work placements for students in school and local community.

38. Train employers with regard to the special functions and requirements of the controlled work placement.

39. Plan and coordinate off-campus work (on-the-job) instruction.

40. Supervise students in on-the-job placements and designing school programs to support the controlled work placement.

41. Identify and secure the cooperation of other agencies concerned with the welfare of the disadvantaged and handicapped students.

42. Possess "know-how" in coordinating and utilizing community resources and services.

43. Refer special needs students to qualified agencies and/or provide assistance with personal, social, or scholastic problems.

44. Establish and/or use program advisory committees.

45. Motivate students in the classroom, shop or laboratory.

46. Provide practical shop or laboratory experiences to enhance classroom learning.

47. Revise courses in accordance with current occupational trends.

48. Conduct a shop or laboratory demonstration for an individual student.

49. Maintain student attention during classroom presentation or demonstrations.

50. Provide appropriate practice for development of basic skills.

51. Teach at the student's level and rate of learning.

EVALUATING PROGRAM AND INSTRUCTION

1. Evaluate and modify his own teaching when appropriate.

2. Evaluate and upgrade the effectiveness of instruction.
3. Recognize and evaluate special instructional problems associated with different rates of human development.

4. Develop, implement, and evaluate post-school follow-up procedures designed to provide guidance to students for a period of up to three years following graduation.

5. Develop, coordinate, and evaluate a community relations program.

6. Evaluate academic and vocational development (progress) of the disadvantaged and handicapped students.
APPENDIX B

LIST OF THIRTY REFINED COMPETENCIES
LIST OF THIRTY REFINED COMPETENCIES

Competencies are incorporated into the undergraduate programs. A number of the following competencies relating to special needs students (students with handicaps) may be incorporated into the Oregon State University undergraduate vocational and technical teacher education program.

I would appreciate your rating each of the following competencies in terms of:

1. Competency is presently being met in the undergraduate program and should continue to be incorporated into the undergraduate program.

2. Competency is NOT being met but should be incorporated into the undergraduate program.

3. Competency is presently being met but should NOT be incorporated into the undergraduate program.

4. Competency is NOT being met and it should NOT be incorporated into the undergraduate program.
### COMPETENCY

<table>
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<tr>
<th>Competency</th>
<th>Met/Should be met</th>
<th>Not met/Should not be met</th>
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<tbody>
<tr>
<td>1. Aid student in establishing <strong>instructional objectives</strong> that are achievable in terms of their handicap(s).</td>
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<td>2. Use appropriate methods of evaluation to determine special needs students vocational progress.</td>
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<td>3. Select instructional materials to accommodate the individual needs of the student.</td>
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<td>4. Provide success-producing situations for individual students.</td>
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<td>5. Consult other educators and specialists in the school setting to evaluate special needs students performance in classes outside the vocational program.</td>
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<td>6. Use job samples to teach specific skills.</td>
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<td>7. Aid the student in entering educational training programs at the post-high school level.</td>
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<td>8. Provide opportunities for students to achieve groups approval.</td>
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<td>9. Interpret your own vocational special needs philosophy.</td>
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<td>10. Adapt vocational education facilities for special needs students.</td>
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<td>11. Adapt vocational education instructional materials for special needs students.</td>
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<td>12. Provide practical shop or laboratory experiences to enhance classroom learning.</td>
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<td>13. Provide for student discussion of occupational aspirations.</td>
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<td>14. Revise courses in accordance with current occupational trends.</td>
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<td>15. Write performance objectives.</td>
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<td>16. Develop performance tests to measure student achievement.</td>
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<td>17. Interpret safety rules and regulations to students.</td>
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<td>18. Screen and select students for the program.</td>
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<td>19. Be able to state the purpose and side effects of drugs commonly taken by students.</td>
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<td>20. Hold a valid first-aid card.</td>
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<td>22. Design and construct jigs and fixture to adapt the vocational training to student abilities.</td>
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<td>23. Specify the vocational training program goals important to the individual students.</td>
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<td>25. Conduct safety inspections.</td>
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<td>26.</td>
<td>Orient students to the program.</td>
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<td>27.</td>
<td>Give first aid to students.</td>
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<td>28.</td>
<td>Observe and report behavior impartially and accurately.</td>
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<td>29.</td>
<td>Criticize and correct student in a frank, calm, tactful manner.</td>
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<td>30.</td>
<td>Serve as a good model for students in terms of work habits, attitudes, and general conduct.</td>
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APPENDIX C

QUESTIONNAIRE
UNIQUE COMPETENCIES
NEEDED BY SECONDARY TEACHERS
TO WORK WITH HANDICAPPED STUDENTS

A Research Project

Conducted by
James W. Kononen

Oregon State University
Corvallis, Oregon
CURRICULA ASSESSMENT INSTRUMENT

Instructions for Completion of the Questionnaire:

1. For each item please place a check-mark in the space which most closely represents your feelings as to the importance of the competency for working with the handicapped student.

Here is an example:

A. Midterm exams motivate students to learn course content.

Very Important: X

Unimportant

This indicates a strong feeling that midterm exams are very important for motivating students.

B. Midterm exams motivate students to learn course content.

Very Important: X

Unimportant

This indicates a strong feeling that midterm exams are very unimportant for motivating students.

2. Please place your check-mark in the middle of spaces, Not on boundaries:

For example:

This: Not This:

X

3. Please do not omit any item—there are no right or wrong answers.

4. Never place more than one check-mark on a single item scale.

Please indicate how important you feel the listed competency is for new graduates of teacher education programs in working with the handicapped student.

1. Aid student in establishing instructional objectives that are achievable in terms of their handicap.

Very Important: X

Very Unimportant

2. Use appropriate methods of evaluation to determine special needs students' vocational progress.

Very Important: X

Very Unimportant

3. Select instructional materials to accommodate the individual needs of the special student.

Very Important: X

Very Unimportant

4. Adapt vocational education facilities for special needs learner.

Very Important: X

Very Unimportant

5. Adapt vocational educational instructional materials for special needs students.

Very Important: X

Very Unimportant

6. Revise courses in accordance with current occupational trends.

Very Important: X

Very Unimportant

7. Be able to state the side effects of drugs taken by students.

Very Important: X

Very Unimportant


Very Important: X

Very Unimportant

9. Specify vocational training goals important to the individual special needs student.

Very Important: X

Very Unimportant

10. Conduct safety inspections.

Very Important: X

Very Unimportant

How many handicapped students have you had in your program in the past two years?

Please Circle.

Some

None
APPENDIX D

INITIAL COVER LETTER
There are several thousand handicapped students in Oregon High Schools. With the help of some faculty members at Oregon State University I am studying various factors which may be important in educating the handicapped student. Especially, we wish to find out ways in which teachers might be better trained to work with this type of 'special needs' student.

Your help in providing information for this study will be greatly appreciated. Completing the enclosed questionnaire should take less than 6 minutes and the postage for returning it is included. It would be very helpful if you could complete the questionnaire and return it before May 10, 1977.

You may notice that the survey instrument has been coded. The code is for accounting purposes only. All information will be kept strictly confidential and in no way will anyone be able to associate your name with your answers.

Thank you again for your help.

Sincerely,

Warren N. Suzuki
Assistant Professor

James W. Kononen
Research Assistant
APPENDIX E

FOLLOW-UP COVER LETTER
We recently mailed you a questionnaire requesting your help in evaluating a list of competencies for teachers working with handicapped students.

If you have already completed and returned the questionnaire, thank you for your assistance. If you have not done so, would you please take the 4 to 6 minutes necessary to complete the form and mail it back to us by May 17, 1977. For your convenience I have enclosed another questionnaire.

You may have noticed that the survey instrument has been coded, which is only for accounting purposes. All information will be kept strictly confidential and in no way will anyone be able to associate your name with your answers.

Thank you again for your help.

Sincerely,

Warren N. Suzuki
Assistant Professor

James W. Kononen
Research Assistant