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AN EXPLORATORY STUDY OF THE ACTIVITIES, EXPERIENCES AND ELEMENTS INCLUDED IN SECONDARY LEVEL COOPERATIVE AGREEMENT PROGRAMS FOR THE HANDICAPPED IN THE STATE OF MICHIGAN

By

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AN EXPLORATORY STUDY OF THE ACTIVITIES, EXPERIENCES AND ELEMENTS INCLUDED IN SECONDARY LEVEL COOPERATIVE AGREEMENT PROGRAMS FOR THE HANDICAPPED IN THE STATE OF MICHIGAN

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The purpose of this study was to determine which activities, experiences and elements should be included in a secondary level curriculum for the handicapped.

The subjects included in the study were educational and vocational rehabilitation personnel working in Michigan's Vocational Rehabilitation-Special Education Cooperative Agreement Programs on the Intermediate School District level. The seventy-six subjects identified for the study were asked to evaluate sixty-four curriculum components. The sixty-four curriculum components had been selected for the study by a review of the literature and a pilot study. The data was subjected to the following analyses:

1. A ranking of curriculum items according to their mean value score.
2. A correlation matrix was computed and a factor analysis was performed on the data to determine which curriculum items might be grouped under broad topic headings for the purpose of discussion.

3. A Spearman Rank-Order Correlation was used to determine whether a relationship existed between what the respondents thought ought to be included in the curriculum (the value scale questionnaire) and what they thought actually was included in the curriculum (degree in curriculum questionnaire).
4. A series of one way ANOVA tests were administered to determine if a number of independent variables significantly affected the value score placed on the different curriculum items by the respondents.

Results

The factor analysis used in this study isolated seven factors for the purpose of grouping the sixty-four curriculum items contained in this study. There were: work experience, pre-vocational skills, mechanical skills, family living, health and hygiene, personality trait and academic skills.

The curriculum items were ranked on the basis of their mean value scores. Analysis of the Spearman Rank Correlation contained in the study revealed that there was a significant correlation between the value scores which the respondent placed on the item and what they thought actually existed in the curriculum. The independent variables that were investigated to ascertain their impact upon the value scores included age, sex, type of position held, education level, training and experience, age of the cooperative agreement,

number of clients carried in the caseload, number of categories served and the availability of a curriculum guide. The findings were:

1. The vocational rehabilitation personnel and educators did not differ significantly in the value scores they placed on the curriculum items.
2. Age, educational level and the number of special education categories served had a very slight affect on the value placed on the curriculum items.
3. The value scores were not affected to a significant degree by the following independent variables: sex, type of educational position, the number of clients in the caseload, past teaching experience and the existence of a formal curriculum guide.
4. The respondents to the survey demonstrated basic agreement with the experts that the vast majority of the items contained in this study should be included in a secondary level vocationally oriented program for the handicapped.
5. The population considered curriculum items concerned with producing social and vocational independence as more valuable than items related to teaching academic skills.

These conclusions were discussed and the following recommendations were made:

1. Work experience should be an integral component of the program.

2. Pre-vocational skills should be taight in the classroom.
3. Consideration should be given to including specific vocational training.
4. In the area of family living skills, emphasis should be placed on home economic skills including budgeting, cooking, proper infant and child care, planning meals, basic first aid, etc.
5. Emphasis should be placed on teaching basic mathematical skills.

Recommendations were made in relation to future research.

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INTRODUCTION

It has become increasingly difficult, in recent years, to distinguish between the role of special education and the role of vocational rehabilitation in preparing handicapped children to meet the challenges of the modern world. Indeed a leading educator, Kirk (1957, p. 27) made the following critique:

> Vocational Rehabilitation for the mentally retarded is a misnomer. Rehabilitation means the restoration of a function that existed at an earlier time. It is properly applied to an individual who through accident or disease has sustained a physical injury. Since mental retardation exists from birth, there is really nothing that existed earlier that should be restored. The proper terminology to use is education or adjustment.

The distinction, though a question of semantics, points out the concern of personnel of both agencies as to the nature of the future role that each agency should play in the "rehabilitation process." One product of this concern has been an increasing realization of the need for better cooperation between the two disciplines.

A major trend in education of the handicapped has been toward a curriculum based on the need for social and vocational adequacy during the handicapped person's adult

life (Kolstoe and Frey, 1965). Vocational rehabilitation and special education personnel agree that it is important to reach handicapped persons during their early developmental years in order to instill in them the proper work skills and habits that are so important to vocational independence as adults. Recently, special education and vocational rehabilitation agencies have joined together in a cooperative programming effort, designed to bridge more adequately the gap which often exists between school termination and assimilation into the world of work.

Since the 1954 Amendments to the Vocational Rehabilitation Law, (Public Law 83-565), there have existed new possibilities for the development of state plans for cooperative programs between special education and vocational rehabilitation. In addition to the general advantage of joining agency forces in planning and working toward the betterment of handicapped children and youth, one aspect of this law has allowed state vocational rehabilitation agencies to recognize the cost of certain special education efforts as "services in kind" and to receive Federal matching funds for them. This provision provided economic support to implement the philosophy of the Act by providing additional personnel for the cooperative approach.

The acceptance of the idea for a formal inter-agency cooperative agreement, made possible through this legislation, is apparent. A review of the studies by Williamson (1967)

and the Virginia Department of Vocational Rehabilitation (1968), revealed that by the academic year 1967-68 formal cooperative agreements existed in all states except the following:

Delaware	Nevada
District of Columbia	New York
Hawaii	North Dakota
Kansas	Rhode Island
Massachusetts	Wyoming

These agreements vary within the broad framework of the enabling Federal legislation and no attempt is made in this study to describe the variations in approach represented in the various state plans. Because this study concerned itself with certain aspects of the Michigan program, however, the major aspects of that agreement are reviewed.

The Michigan Cooperative Agreement

The Michigan Cooperative Agreement is directed toward effecting a comprehensive and coordinated effort between special education and vocational rehabilitation at the secondary level. The ultimate objective of this program is the assimilation of the handicapped child into the world of gainful employment. In order to achieve this objective, it is essential that the special education curriculum be concerned with those skills which lead to social and occupational adequacy.

When a cooperative agreement is formulated by a school district and the Division of Vocational Rehabilitation (DVR), an agreement is signed in which the school district agrees to provide:

a. A secondary program which accomodates the specific needs of handicapped pupils.

b. A designated counselor or contact person with time and responsibility to cooperate in the proposed program.

c. Administrative support and high school credit for time spent by students in on-the-job training.

d. Special services such as speech correction, school social work, and psychological testing as needed.

e. School records which may be helpful in individual program development.

f. Administrative supervision as necessary to insure success of the cooperative venture.

g. A report to the State Vocational Rehabilitation Office regarding the school's contribution to the agreement during the fiscal year.

h. Orientation for the DVR Coordinator to the school philosophy and policy.

The Division of Vocational Rehabilitation agrees to provide:

a. A DVR Coordinator assigned directly to the school for an agreed portion of time.
b. Technical supervision for any school personnel assigned to a cooperative agreement.
c. Cooperation with school personnel in seeking and coordinating on-the-job training assignments.
d. Placement and follow-up services upon a client's termination of the school program.
e. An annual summary report to the public schools, including the activities of the DVR counselor as related to the cooperative agreement.

The salary, travel expenses, and secretarial services for that portion of time in which the education personnel work in the cooperative agreement are used as "services in kind" by the state DVR in applying for funds from the Federal Vocational Rehabilitation Program on a three to one matching basis. The resulting funds are used by the DVR coordinator to provide those services which DVR agrees to provide in the cooperative agreement.

In 1968-69, school districts in Michigan contributed over $1,111,000 in services under the cooperative agreement making over $3,333,000 available to provide service to handicapped children under this program.

Rationale for the Study

Many authorities, in the field of Special Education, have recognized the need to move toward a curriculum in which the ultimate educational goal would be vocational placement. These educators included: Garton (1964), Weber (1963), Garrison and Force (1959) and Wallin (1955). The Cooperative Agreement, as previously described, is one means through which many of the complex services necessary for a vocational placement curriculum can be better provided.

DiMichael (1964) has charged, however, that in many instances, work-study programs, including Vocational Rehabilitation-Special Education Cooperative Projects, were being used for the primary purpose of getting the retarded out of the schools. In order to combat this type of abuse of the work-study program, several states (e.g., Texas, Missouri, New Jersey, etc.) have provided formal program guidelines at the state level, including curriculum content and other provisions which might assure the best possible program for the student. The state of Michigan has to date provided no guidelines for a specific curriculum, but has allowed these programs to be designed at the local level.

The need for this study of Michigan's Cooperative Agreement program was in part engendered by an expressed desire, on the part of personnel in the State Department of Education and of educators in the field, to be more

knowledgeable about the secondary level curriculum for the handicapped as presently offered throughout the State.

The need for the study was given further impetus by passage of the Vocational Education Amendments of 1968 (Public Law 90-576). Under the provisions of this law, at least ten per cent of the funds appropriated in Vocational Education must be used for the education of handicapped persons who because of their handicapping condition could not find success in the regular vocational education program without special educational assistance or who required a modified vocational education program.

A unique opportunity appeared to exist with the passing of this legislation for special education and vocational rehabilitation to utilize the resources of vocational education in the training of the handicapped. The implications of this legislation upon the cooperative agreement were emphasized by the major recommendations of a Michigan State Department of Education Discussion Panel on Vocational Rehabilitation and Special Education held on August 15, 1968. The recommendations were as follows:

1. Integrate Special Education Programs with Vocational Education and develop "tracks" in Vocational Education for the purpose of providing job preparation services to the handicapped.

2. Develop a closer relationship between DVR and Special Education in order to devise a curriculum which will facilitate a gradual transition from school to a rehabilitation program and subsequently, employment.
3. Initiate a screening process (involving DVR and Special Education) that will identify those with vocational problems as early as possible so that the programming might be planned accordingly.

One of the objectives of this study is to assess the curriculum being offered in the public schools with special education-vocational rehabilitation cooperative agreements. Consideration should be given, at a later date, as to the ways in which this curriculum might be revised in order to fully utilize the services of other educational specializations (including vocational education) in meeting the vocational needs of the handicapped. Special education must be prepared to make recommendations regarding the types of program adaptations which are necessary for future growth and improvement of programs geared to assisting the handicapped in developing social and vocational adequacy in adult life.

The Statement of the Problem

The major purposes of this study are:

1. To describe the activities, experiences and elements which national authorities have indicated should be included in a secondary level vocationally oriented curriculum for the handicapped.
2. To survey the Michigan Intermediate School Districts having Special Education-Vocational Rehabilitation Cooperative Agreements to ascertain to what extent these activities, experiences and elements are reported to be evident in their secondary level curriculum for the handicapped.
3. To compare the values assigned to the curriculum components by vocational rehabilitation personnel and educational personnel who are assigned to work, under the cooperative agreement.
4. To investigate the affect of a number of variables upon the values assigned to the curriculum components. These variables include age, sex, type of position held, educational level, training and experience, age of the cooperative agreement, number of clients carried in caseload, number of categories served and availability of a curriculum guide.
5. To present, based upon the above information, some recommendations and guidelines to be considered in planning a vocationally oriented secondary level curriculum for the handicapped.

Delimitations of the Study

The principal delimitations of this study are:

1. The study was limited to the state of Michigan.
2. The study was limited to those secondary level programs for the handicapped that are housed in an area that is served by a cooperative agreement program at the Intermediate School District level.
3. The survey was a probe study into an area which will require additional investigation.
4. The data obtained from the "Degree in Curriculum Questionnaire" was in terms of reported data rather than actual objectively observed data.

Definition of Terms

The term "Intermediate School District" is defined as a corporate body established in accordance with the provisions of Chapter 8 of the Michigan School Code of 1955.

Special Education is defined as a type of education designed especially for deaf, hard of hearing, blind, partially seeing, speech defective, homebound, mentally handicapped, crippled or otherwise physically handicapped, and children having behavior problems, as are defined by the Superintendent of Public Instruction. This definition was in compliance with R. 340, 291a of the Michigan School Code of 1955.

Vocational education means vocational or technical training or retraining which is given in schools or classes including field or laboratory work and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicicans in recognized occupations.

The term "vocational rehabilitation and vocational rehabilitation services" means any educational or other needed services including, but not limited to, determination of extent of disability, vocational diagnosis, vocational guidance, rehabilitation training, medical services, transportation, maintenance, and training books and materials, found to be necessary to compensate a disabled individual for his vocational handicap and to enable him to engage in a suitable occupation or to be assisted into independent living. This definition is in accordance to Act 232 of the Public Acts of 1964, of the State of Michigan, popularly referred to as the Rehabilitation Act of 1964.

A vocationally oriented curriculum is defined as a curriculum which uses academic subjects, experience, work and work evaluation to teach vocational, personal and social skills (Kolstoe and Frey, 1965, p. 47).

CHAPTER II

A REVIEW OF THE LITERATURE

The Need for a Vocationally Oriented Curriculum

The vast bulk of the literature which supports the need for a vocationally oriented secondary level program for the handicapped was drawn from the area of work with the educable mentally retarded. This was due to the fact that the major thrust in vocationally oriented programs for the handicapped has been in that area.

The need for a vocationally oriented curriculum which emphasized the acquisition of social and vocational skills has been clearly recognized in the field of education of the handicapped.

The early studies attempted to show that it was possible for the mentally subnormal to become occupationally and socially adequate during their adult lives. Some of the more significant early studies which emphasized the ability of the mentally retarded to become self-sufficient included those by Baller (1936), Charles (1953), Kennedy (1948), and Phelps (1956).

Early pioneers in the area of work study programs for the handicapped recognized not only society's gain but also the concomitant gain in the area of the personal needs of the handicapped individual. Heck (1953) pointed out that being able to work enabled the handicapped person to adjust himself better socially. The author stated that if a person gains mastery of some one trade he can become self supporting, gain confidence in his ability to maintain himself, and thus become desirous of cooperating with society instead of combating it.

Syden (1962) stated that the trend in curriculum planning for secondary school age mentally retarded children, whether organized under traditional subject titles or under core units of study, is socio-occupationally oriented. The goals of such a program are to develop the individual's capabilities and assist him in finding his place in the economic society upon completion of formal schooling.

The Present Situation

There are many forces which have increased the need for a vocationally oriented curriculum for the handicapped. Weber (1963) pointed out that, in today's society, more children are going to school for longer periods of time and therefore as the educational level of the total community rises the disparity between the normal children and the retarded becomes greater. This factor emphasizes the need to

provide additional educational programs on the secondary level for all handicapped children. Another force which Weber mentioned is the impact of technology upon the labor market. Machines are performing more of the jobs which were formerly open to the handicapped. These jobs were mainly in the unskilled areas. Therefore, it is necessary for us to develop a secondary level program for the handicapped which will provide them vocational training in the semi-skilled job areas.

The modern world's susceptibility to constant change also suggests a strong vocationally oriented educational program for the handicapped. Kruger (1963) stated that there were still many jobs open to the retarded in the service area if they were properly trained. However, the effects of the change system may necessitate an ongoing system of retraining as technological advances make some of these jobs obsolete.

Vocational Education for the Handicapped

Many studies in the area of vocational education have pointed out that vocational education has not lived up to its' potential as a source of programming for the handicapped.

Brice (1966) discussed the dilemma that although vocational education holds tremendous potential for the handicapped, vocational education typically shies away from

providing service to these children. He felt that this was because they feared that an unfavorable reflection would be cast on vocational and technical education.

Lemee (1966) stated that not only was vocational education denied the atypical child, but that the total community discriminated against him in respect to special training and employment.

Federal legislation has attempted to remedy this situation under the provisions of the Vocational Education Amendments of 1968 (Public Law 90-576). At least ten per cent of the federal funds appropriated under this law are to be used for the education of the handicapped.

Vocation Rehabilitation's Early Involvement in Educational Programming for the Handicapped

The early involvement of Vocational Rehabilitation in educational programming took the form of providing research and demonstration grants to work-experience programs for the handicapped. The success of these programs gave great impetus to the formulation of cooperative agreements between special education and vocational rehabilitation. The following studies were typical of those funded under the research and demonstration grants program.

A detailed study was made by Harvey, McMillen and Ebersole (1964) of 209 mentally retarded youth in the areas of personal, social, and vocational competencies.

Peck and Stephens (1964) attacked the problem of success of young mentally retarded males in a Cooperative Research Project. Their objectives were: 1) to determine the fundamental attributes or basic factors present in personal, socio-civic, and vocational success, 2) to validate a battery of measures for use in predicting the success of mentally retarded youth, 3) to ascertain if significant differences in the criterion of success existed between four groups of subjects who had been trained in four different environments.

A work experience program for the handicapped in effect at Santa Monica High School was described by Wakefield (1962). The Special Education Program was work oriented from the earliest grades. The author stated that the pupils who came to the high school from the special training classes in the lower grades were well prepared mentally and emotionally for ultimate employment. He concluded that the work experience and successful employment had a positive effect upon the young person.

A very ambitious Research and Demonstration Project was conducted by Galazan and Lenard (1964) in the Milwaukee, Wisconsin area. The study provided an opportunity for comparing and scientifically investigating the effectiveness of a program of academic work and concurrent work experience at the Jewish Vocation Service the other half-time.

McPherson and Stephens (1964) reported on an Extension and Improvement Project of the Ohio Bureau of Vocational Rehabilitation and the Dayton Public Schools, involving a sample of 215 eleventh and twelfth grade students enrolled in bona fide special education classes for "slow learners". The purpose of the project was to predict on the basis of four criteria the success of those participants who were selected for training. These criteria were 1) I.A.; 2) chronological age; 3) academic achievement; and 4) teacher rating.

West and Hosfetter (1964) reported on a research and demonstration project conducted by the Oklahoma City Public Schools. The purpose of the project was to demonstrate that the coordination of Vocational Rehabilitation and Special Education could create a program of service which would lead to satisfactory life adjustment of groups of handicapped high school students. The sample consisted of 231 students-clients, ages fourteen to twenty-four. Distributed among them were the following major handicaps: Mental Retardation--71 per cent, Emotional Problems--12 per cent, and Physically Handicapped--17 per cent.

A cooperative work-study program for the mentally retarded in Des Moines, Iowa, which had been in effect since 1957 was described by Denny and Harris (1963). The purpose of the study was to determine how many of the graduates were currently employed and in which service areas they were currently employed.

Factors Affecting the Cooperative Agreement

The original work study programs sponsored under research and demonstration grants by the Vocational Rehabilitation Administration provided the basic data upon which the cooperative agreement between special education and vocational rehabilitation was forged.

The research and demonstration grants, however, did not investigate the curriculum content to be included in a cooperative work study program. Indeed, Deno (1965) reported that the curricula of special programs for the handicapped have seldom been established on the basis of research.

Several of the research and demonstration projects funded by the Vocational Rehabilitation Administration investigated factors which should be considered in planning a cooperative agreement. Gottwald (1965) studied the factors that affected collaboration between school and vocational rehabilitation programs and made the following recommendations:

1. Effort should be made to acquaint all secondary programs for the mentally retarded with the services offered by DVR, particularly the newer and smaller programs.
2. The professional training of secondary teachers for the mentally retarded should include more information and exposure to the services offered by DVR.

3. The professional training of counselors should include more information about the mentally retarded and about school programs for the mentally retarded.
4. Both secondary teachers of the mentally retarded and vocational rehabilitation counselors should expand efforts to collaborate in comprehensive programming for the mentally retarded.

A study of Eskridge and Partridge (1963) revealed that the mentally handicapped were losing jobs more often through their failure to adjust to a work situation than because of their inability to perform the job assigned. The study also indicated that failure in job training and employment was primarily due to a lack of supervision in the initial training and employment.

Kokaska (1968) suggested that schools cannot work independent of the many facilities that are available in the community if the programs are to be established which balance the individual abilities of the handicapped and the employment demands within the labor market.

Lewis (1967) has recommended the following basic criteria for establishing a cooperative work-study program.

1. The work-study program should be based on sound educational and rehabilitation principles.
2. Both agencies--public education and rehabilitation should cooperatively plan the work-study program.

3. All people who will have responsibilities in the work-study program should be involved in the early planning of the project.
4. Parents should be active in early planning and in the implementation of work-study programs.
5. Community agencies should be active in the early planning and the implementation of a work-study program.
6. Community and business people should be active in early planning and in implementation of a work-study program.
7. The work-study program must be developed from a careful analysis of the needs of the students to be served.
8. A work-study program must be entered into with the intent that existing agency programs will be altered as the work-study program is developed.
9. The specifics of the program should delineate agency responsibilities so that both efficiency and effectiveness can prevail.

The Curriculum in a Cooperative Agreement Program

When planning the curriculum for a cooperative agreement program it is essential that the individual needs of the children to be served are taken into consideration. The cooperative agreement according to Marshall (1968) should

consider serving children with all types of handicaps. He felt that although the mentally retarded form the major bulk of the population to be served, consideration should also be given to providing cooperative services to the emotionally disturbed, physically handicapped and multi-handicapped.

A number of studies have been conducted for the purpose of determining the curriculum content for a cooperative agreement program.

Lewis (1967) reported that a number of employers felt that more emphasis should be placed on teaching reading skills. They felt that a lack of reading ability hindered students in the "fringe" requirements of their jobs, such as reading bulletin board memos, labels and a variety of forms that employees are required to submit. Employers felt that in some cases only a student's reading disability prevented him from acquiring a more highly skilled job.

One of the early work-study programs in Texas (The Marbridge Plan) was reviewed by Peck (1958). It evaluated students in the following areas to determine their eligibility for graduation and certification for job placement: 1) vocational proficiency, 2) physical health and stamina, 3) social adjustment, 4) personal care and appearance, 5) mental maturity sufficient for the job goal, 6) acceptable use of leisure time, 7) emotional stability and 8) adequacy of practical information.

Peterson and Smith (1960) felt that the deficiencies of handicapped citizens, in the areas of social and occupational adequacy could be ameliorated through a comprehensive two or three year high school program. Such a program when conducted in the public schools should:

1. Be organized for the purpose of providing experiences and developing attitudes and concepts which are required in community membership.
2. Be devoted to an intensive study of jobs, job requirements, and job opportunities in the community.
3. Provide the students with knowledge and familiarity of the various community agencies that could help the students with their vocational, social and personal problems. Likewise, they should be provided knowledge concerning recreational facilities available in the community so that they may spend their leisure time effectively and with pleasure to themselves.
4. Include a course in driver training.
5. Include counseling services for the students. This should be a cooperative effort between the special class teacher and the secondary school counselors. Complete diagnostic services should be available in order that their assets and disabilities may be assessed.
6. Provide schoolwork experience for the students in which work of the class is organized so it would

assist in the vocational adjustment of each of the pupils. In this manner, understanding would be brought to the employer as to the capabilities and limitations of the prospective worker.

7. Provide extended instruction in home and family living in areas such as: clothing care, laundering, pressing, food and cooking, child care, buying and budgeting, sewing, how to entertain friends, home decorating, cleaning, simple home repairs, yard beautification and care, gardening, and other immediately practical abilities.

Fudell and Peck (1964) tested the effectiveness of certain curriculum materials used with secondary school age mentally retarded pupils. The major purpose of this study was to see what curriculum units could be devised and used in a daily classroom environment which would significantly change personality characteristics and academic proficiency of secondary school age mentally retarded pupils. The sample consisted of 80 male and female, white and black students, selected from junior and senior high school classes for the educable mentally retarded in Waco, Texas, secondary schools. The results of the statistical treatment of test scores showed that although the 12 curriculum units were not effective in improving academic proficiency, they were instrumental in causing better social and vocational attitudes and values in the secondary school age mentally retarded youth in the study.

Goldstein and Seigle (1958) directed an extensive curriculum study in the area of the educable mentally retarded for the Illinois Department of Public Instruction. The study emphasized the need to relate education for the retarded to the various life functions. The resulting curriculum guide was developed around the following life functions and activities:

1. Citizenship
2. Communicating
3. Home and Family Life
4. Leisure Time
5. Management of Materials and Money
6. Occupational Adequacy
7. Physical and Mental Health
8. Safety
9. Social Adjustment
10. Travel

Kolstoe and Frey (1965) did an extensive study of a high school work-study program for the mentally subnormal. They found these students need to be taught the kinds of skills which they will need to maintain themselves. The mentally subnormal need a curriculum which is based on a determination of the skills needed for independent living and occupational adequacy. They felt that the curriculum should include:

1. A program which provides for the amelioration of ancillary handicapping conditions.
2. On-the-job training in a high school building and on-the-job training off the high school campus which should eventually involve an eight hour, off campus, supervised work day.

Summary

The review of the literature indicates that there has been a shift in recent years away from the academically oriented curriculum and toward a curriculum geared to the acquisition of the traits and skills necessary for social and vocational adequacy in adult life.

Factors which effected this change were reviewed. They include:

1. The rise in the overall educational level of the total community. This has accentuated the disparity in educational level between the normal child and the retarded child.
2. The technological revolution has done away with many of the unskilled jobs formerly available to the handicapped.
3. The modern world's susceptibility to constant change demands continuous retraining.

The concerns of vocational educators about the lack of service provided to handicapped children by vocational

education programs were discussed. Two reasons were given for the lack of service to the handicapped by vocational educators namely:

1. They feared the stigma of the identification of vocational education with the handicapped, and
2. They reflected the total community's discrimination against the handicapped in respect to special training and employment.

The early work-study programs which were funded by vocational rehabilitation research and demonstration grants were reviewed. The conclusions based on these projects are highly subjective and general. The conclusions were:

1. Work experience and successful employment contributed to the development of a positive self-concept.
2. Deficiencies of the handicapped in the areas of social and occupational adequacy can be ameliorated through this type of program.

The curriculum components in a cooperative agreement work-study program were investigated. They included many specific elements which the items on the research instrument of this study were developed.

CHAPTER III

METHODOLOGY

Introduction

The major purpose of this chapter is to provide a step by step narrative of the methodology involved in this study. It includes a description of how the instrument, used in this study, was developed and how the population for the study was determined. The procedure utilized in the study is also discussed and the method used for statistical analysis is summarized.

Development of the Instrument

The development of the instrument was one of the major tasks of this study. There existed no major compilation of the types of activities, experiences, and elements that should be included in a secondary level, vocationally oriented curriculum for the handicapped. What did exist was a number of varied opinions by people in the field regarding what might be considered for inclusion in such a curriculum. Many of these opinions were highly subjective and few were supported by any type of empirical research.

A search of the literature in the field was conducted and an initial instrument was developed consisting of sixty activities, experiences and elements which authorities in the field felt should be included in this type of curriculum. In this manner the following curriculum items were identified:

1. Surveying job opportunities in the community, utilizing telephone directories, newspaper advertisements, etc.
2. Identifying skills needed for different jobs.
3. Practicing in applying for a job by filling out application blanks and writing letters.
4. Reading related to following directions and acquiring vocabulary related to vocations.
5. The discussion of fringe benefits related to a job.
6. Field trips to possible sources of future employment.
7. The consideration of the relationship of health to the job.
8. Activities stressing the importance of good manners and social behavior on the job.
9. The function and use of hand tools.
10. The importance of strict compliance to safety rules and regulations.
11. The problems related to earning, saving, and spending money.
12. The need to understand the different roles played by members of the family unit.
13. The performance of basic housekeeping tasks.
14. The selection and care of family clothing.
15. The safe and correct operation of household equipment.
16. Planning meals.

17. Serving of food to family and guests stressing the proper table setting and simple rules of etiquette.

18. Learning the proper storage and care of food.

19. Acquiring the skills necessary for proper infant and child care.

20. How to budget for family needs.

21. Discussing the hidden costs involved in loans, installment buying, and service charges.

22. The importance of simple maintenance tasks and the repair of household items.

23. Stressing the importance of life and hospitalization insurance.

24. Understanding governmental organization on the local, county, state, and federal level.

25. The respect of laws and regulations made for the public good.

26. Respecting private and public property rights.

27. Classroom activities designed to teach simple rules of parliamentary procedure.

28. Participation in school-civic activities such as campaigns, elections, and committees.

29. Learning about the services offered by public and private service organizations in the community.

30. Understanding the procedures to follow in times of disaster and accident.

31. Understanding the relationship between the payment of taxes and the receiving of public services.

32. The reason for and customs surrounding the celebration of holidays.

33. The role of health helpers in the community (i.e., doctors, dentists).

34. The importance of proper food, exercise, and rest to a person's physical health.

35. Basic first aid.

36. Sex education.

37. The causes, effects, and means of prevention of venereal disease.

38. The cost and effects of alcohol, narcotics, and tobacco.

39. The types of communicable diseases and their control and prevention.

40. Learning habits of cleanliness relating to proper body care including the prevention of bad breath and the use of deodorants.

41. The basic number skills (i.e., addition, subtraction, etc.)

42. Counting and making change using real money.

43. Developing an understanding of simple fractions.

44. Measuring liquids and solids.

45. The use of linear measures such as: inch, foot, etc.

46. The use of scales in weighing objects.

47. The use of a clock and calendar.

48. Developing concepts about temperature (i.e., boiling, freezing, reading a thermometer).

49. Using functional arithmetic in cooking.

50. The application of functional arithmetic in determining the costs of housing.

51. Utilizing arithmetic in vocationally related areas.

52. The recognition of familiar geometric shapes.

53. The development of concepts of self and related areas.

54. The proper procedure to be followed in placing both personal and business telephone calls.

55. A discussion related to the advantages and disadvantages of going steady.

56. The importance of being punctual.
57. Developing the ability to accept and profit from criticism.
58. Teaching the value of being honest and trustworthy.
59. Work experience in the school for pay.
60. Work experience outside the school for pay (O.J.T.)

These items were used to develop an instrument which also included a personal data sheet containing questions important to the establishment of the baseline data on the independent variables to be tested in the study. The curriculum items were arranged into two questionnaires, a Value Scale Questionnaire and a Degree in Curriculum Questionnaire. Both Questionnaires contained all sixty items. The items were to be evaluated on a five point Likert Scale (Oppenheim, 1966). The five point Likert Scale for the Value Questionnaire part of the instrument was as follows:

1. No Value
2. Little Value
3. Some Value
4. Valuable
5. Very Valuable

The five point Likert scale for the Degree in Curriculum Questionnaire part of the instrument was as follows:

1. Not at all
2. Mild
3. Moderate
4. Extensive
5. Very Extensive

Eight members of the staff of the Michigan Department of Education, Division of Special Education, took part

in a pilot study in order that the instrument might be further refined. It was requested that they evaluate each of the questionnaire items with regard to germaneness to the study. They were also to recommend any additional items which they felt should be included in the study and were requested to comment on the instrument in general.

As a result of the pilot study, four items were added to the instrument. The items which were added as a result of the pilot study were:

61. Work experience in the school for credit (no pay).
62. Use of job stations for job exposure where students rotate periodically.
63. Knowledge about and use of power tools.
64. Specific vocational training (auto mechanic, etc.)

All of the people in the pilot study felt that the items in the instrument did an excellent job of isolating the curriculum components to be considered in constructing a vocationally oriented secondary level curriculum for the handicapped. A copy of the finalized instrument is contained in Appendix B.

Identification of the Population

A listing of the names and addresses of the educational personnel assigned to the special education-vocational rehabilitation cooperative agreement was obtained by examination of the formal cooperative agreements contracts for the

academic year 1968-69 which were on file at the Michigan Dept. of Education, Division of Special Education. This procedure also produced a partial listing of the vocational rehabilitation personnel. In order to complete this partial list, it was necessary to contact the regional offices of the Division of Vocational Rehabilitation for the additional names of the personnel assigned to cooperative agreements.

After the total population was identified in this manner, a decision was made to limit the study to those educational and vocational rehabilitation personnel who were involved in cooperative agreements on the intermediate school district level. This decision was based on the following factors:

1. Under the terms of the cooperative agreement, these persons are expected to be knowledgeable concerning the secondary level educational programs for handicapped children within their districts.

2. The role played by these persons at the intermediate school district level is similar throughout the State. It is primarily a consultive and coordinative function. If the sample had been broadened to include local district personnel, it would have included persons with extremely diverse roles.

A total of seventy-six subjects were identified as meeting the criteria for participation in the survey. They included forty-three educators and thirty-three rehabilitation counselors.

The Population

The personal data sheet, completed by the respondents in the survey, disclosed the following information!

Table 3.1 Sex of respondents.

Subjects	Male	Female	Total
Educators	29	14	43
Rehabilitation Counselors	28	5	33
Totals	57	19	76

Table 3.1 reveals that of the total population involved in the survey 57 were males and 19 were females. The bias in favor of males over females was more acute among rehabilitation counselors (28-5) than among educators (29-14).

Table 3.2 Reported age of respondents.

Subjects	24-34	35-44	45 and over
Educators	14	18	11
Rehabilitation Counselors	24	8	1
Totals	38	26	12

The population was divided into three general age groups. The first group included the respondents from age 24 through age 34. The second group included those ages 35

through 44 and the final group included those respondents ages 45 and over. The rehabilitation counselors tended to be younger than the educators. They had a larger number of respondents in the youngest age group (24-14). The educators had more respondents in the middle aged group (18-8) and the oldest aged group (11-1).

Educational Level Reported

Table 3.3 Reported educational level of respondents.

Subjects	BA	MA	MA+30 Sem. Hrs.
Educators	12	19	12
Rehabilitation Counselors	21	10	2
Totals	33	29	14

Table 3.3 reveals that the educational level of the educators was higher than that of the rehabilitation counselors. The educators had more respondents with a master's degree or higher than the rehabilitation counselors (31-12).

Type of Position Held

There were 33 vocational rehabilitation counselors and 43 educators in the total population. The educators were divided into the following groups:

1. Type C, teacher-counselors of the mentally retarded (N=25).

2. Type IV, teacher-counselors of the physically handicapped (N=9).

3. Other (N=9). This category included persons designating themselves as guidance counselors, diagnosticians, school psychometrists and classroom teachers of the mentally retarded.

Experience and Training

Table 3.4 Experience and training.

	Yes	No
Educators		
Teaching Normal Classes	29	14
Counseling	23	20
Rehabilitation Counselors		
Teaching	14	19
Special Education Training	6	27

Table 3.4 revealed that 29 of the educators reported prior experience teaching normal youth. Twenty-three of the educators stated that they had counseling experience prior to their current position.

The vocational rehabilitation counselors reported that 14 had prior teaching experience and that 6 had received some type of formal special education training.

Categories Served

Table 3.5 Number of disability areas served.

Disability Areas Served	1-2	3-4	5 or more
Educators	22	12	9
Vocational Rehabilitation Counselors	3	8	22
Totals	25	20	31

Table 3.5 shows that the vocational rehabilitation personnel served more diverse types of handicaps than the educators. The educators had more persons serving only one or two special education categories than the rehabilitation counselors (22-3). This was due to the fact that many of the smaller school districts serve only the retarded. The rehabilitation counselors serving three or more different types of special education categories outnumbered their educational counterparts (30-22) despite the fact that the total number of educators (43) was greater than the total number of vocational rehabilitation personnel (33).

Age of the Cooperative Agreement

Table 3.6 Reported age of the cooperative agreement.

Years	1	2	3-4	5 or more
Educators	9	22	11	1
Rehabilitation Counselors	3	18	12	0
Totals	12	40	23	1

The data contained in Table 3.6 reveals that 12 respondents reported that their cooperative agreement was in its first year of operation, 40 respondents reported that their cooperative agreements were in their second year of operation and 23 respondents reported that their agreements were in the third or more years of operation. The lack of congruence in the data reported by educators and rehabilitation counselors is due to the fact that rehabilitation counselors typically cover more than one school program.

Curriculum Guide

The educators were asked whether or not there existed within their school district a formal curriculum guide for the secondary level vocationally oriented program for the handicapped. Thirty-two educators responded positively and eleven negatively.

Procedure

The following intermediate school districts were contacted for permission to administer the survey questionnaire to their staff members who were involved in the cooperative agreement:

1. Berrien
2. Calhoun
3. Cass
4. Charlevoix-Emmet
5. Eaton
6. Genesee
7. Huron
8. Ingham
9. Jackson-Hillsdale
10. Kalamazoo Valley
11. Kent
12. Lenawee
13. Livingston
14. Macomb
15. Muskegon
16. Newaygo
17. Oakland
18. Saint Clair
19. Saint Joseph
20. Shiawassee
21. Van Buren
22. Washtenaw

Permission was also requested of the following district offices of the Division of Vocational Rehabilitation to administer the survey questionnaire to those members of their staff who were involved in the cooperative agreement:

1. Benton Harbor
2. Flint
3. Grand Rapids
4. Jackson
5. Lansing
6. Marquette
7. Muskegon
8. Pontiac
9. Traverse City

The necessary permission was received in every instance thus establishing the total population to be surveyed.

A personal visitation was made to most of the above intermediate school districts and vocational rehabilitation offices. At this time, the researcher personally administered the questionnaire in either individual or group sessions.

An exception was made to the above procedures in the case of five intermediate school districts and two vocational

rehabilitation regional offices. The intermediate school districts were Cass, Charlevoix-Emmet, Huron, St. Joseph, and Van Buren. The vocational rehabilitation regional offices were in Traverse City and Marquette. Copies of the survey questionnaire and written instructions for completing it were mailed to this sample. A telephone contact was made for the purpose of clarifying the procedure to be followed and to answer other questions which might have arisen.

All the subjects were asked to complete the personal data sheets and to evaluate each of the items in relation to the value they personally place on each as a part of a vocationally oriented secondary level program for handicapped children.

The researcher was successful in having all seventy-six subjects evaluate the curriculum items. These seventy-six respondents represented 100% of the total population identified as meeting the criteria for participation in the study.

Hypotheses

In order to answer the primary questions toward which this study was directed, the following hypotheses were tested:

1. H_o There is no significant correlation between the value scores assigned to the curriculum items and the degree to which they are included in the curriculum.

2. H_o There are no significant differences in the value scores assigned to the individual items by educational and vocational rehabilitation personnel.
3. H_o There are no significant differences in the value scores assigned to the individual items based on the age of the members of the sample.
4. H_o There are no significant differences in the value scores assigned to the individual items based on the sex of the respondent.
5. H_o There are no significant differences in the value scores which can be attributed to the length of time the special education-vocational rehabilitation co-operative agreement has been in effect.
6. H_o There are no significant differences in the value scores placed on the curriculum components based upon the educational level of the respondents.
7. H_o There are no significant differences in the value scores of the subjects which can be attributed to the number of clients in their caseload.
8. H_o There are no significant differences in the value scores which can be attributed to the number of special education categories served in the coopera-tive agreement.
9. H_o There are no significant differences in the value scores placed on the curriculum components based upon the type of position held by the educators in the sample.

10. H_o There are no significant differences in the value scores of the educators which can be attributed to prior experience in classroom teaching with normal children.
11. H_o There are no significant differences in the value scores of the vocational rehabilitation personnel which can be attributed to training in special education.
12. H_o There are no significant differences in the value scores assigned to the curriculum components by the vocational rehabilitation personnel which might be based on prior teaching experience.
13. H_o There are no significant differences in the value scores assigned to the curriculum items by the educators which might be attributed to whether or not they had a curriculum guide.

Analysis of Data

An IBM 3600 computer was used to process the data and to perform the statistical analyses. Standard computer programs written in Fortran were utilized to handle the following analyses:

1. A factor analysis and correlation matrix. These analyses were run to assist the researcher in grouping the curriculum items under broad topic headings for the purpose of discussion.

2. A ranking of curriculum items according to their mean value score. These ranks were discussed under the broad topic headings established through the factor analysis.
3. A Spearman Rank Correlation was also utilized to determine whether there was a significant relationship between item value scores and the extent to which they were included in the curriculum.
4. A one-way analysis of variance was performed utilizing the sixty-four curriculum components as dependent variables and twelve factors investigated as independent variables. A total of 768 computations were made. A .003 level of significance was established as the critical area for accepting or rejecting differences. Only those items upon which significant differences were found were reported.

CHAPTER IV

ANALYSIS OF DATA

Analysis of Value Questionnaire Results

The results of the value score questionnaire were tabulated and an overall mean score for all respondents on each curriculum element was computed.

A correlation matrix was computed and a factor analysis was performed on the value scores to determine broad topic headings under which the curriculum elements could be placed for the purpose of discussion.

Because of the small sample size (76) in relation to the number of curriculum items (64), a type of Factor Analysis more commonly referred to as a Principle Components Analysis was used. An orthogonal rotation was performed because the data consisted of uncorrelated factors.

The curriculum items were assigned to topic headings based on the heaviest loading per factor. In those cases where the factor loading was negative, the researcher reflected the factor by multiplying the factor by -1. The factor loadings are contained in Appendix C.

The seven general factors isolated by the principle components analysis were:

1. Work Experience
2. Pre-Vocational Skills
3. Mechanical Skills
4. Family Living
5. Health and Hygiene
6. Personality Traits
7. Academics

Tables 4.1-4.7 summarize the data on each curriculum item grouped under its' factor heading. The specific factor loading is given for each item. The overall mean value score and overall mean rank is given on each curriculum element. A composite mean score for each factor grouping is also reported.

Work Experience

The four curriculum items contained in Table 4.1 loaded very high on the factor, work experience, in the principle component analysis.

Table 4.1 Summary of the factor loadings, means and ranks of curriculum items related to work experience.

	Curriculum Element	Factor Loading	Mean	Rank
59.	Work experience in the school for pay	(0.7088)	4.131	22
60.	Work experience outside the school for pay (O.J.T.)	(0.6557)	4.570	1
61.	Work experience in the school for credit (no pay)	(0.7193)	3.803	34
62.	Use of job stations for job exposure where students rotate periodically	(0.6454)	4.382	11
	Composite		4.266	

Pre-Vocational Skills

The eight curriculum elements which loaded higher on this factor than any other are contained in Table 4.2

Table 4.2 Summary of the factor loadings, means and ranks of curriculum items related to pre-vocational skills.

	Curriculum Element	Factor Loading	Mean	Rank
1.	Surveying job opportunities in the community, utilizing telephone directories, newspaper advertisements, etc.	(0.5178)	4.342	15
2.	Identifying skills needed for different jobs	(0.4990)	4.474	7
3.	Practicing in applying for a job by filling out application blanks and writing letters	(0.3482)	4.461	8
4.	Reading related to following directions and acquiring vocabulary related to vocations	(0.3824)	4.000	26
5.	The discussion of fringe benefits related to a job	(0.3303)	3.461	54
6.	Field trips to possible sources of future employment	(0.4721)	4.158	21
7.	The consideration of the relationship of health to the job	(0.6908)	3.895	30
8.	Activities stressing the importance of good manners and social behavior on the job	(0.3985)	4.539	5
	Composite		4.154	

Mechanical Skills

The three items which loaded higher on the factor mechanical skills than any other are contained in Table 4.3.

Table 4.3 Summary of the factor loadings, means and ranks of curriculum items related to mechanical skills.

	Curriculum Element	Factor Loading	Mean	Rank
9.	The function and use of hand tools	(0.5649)	3.592	48
63.	Knowledge about and use of power tools	(0.6233)	3.658	42
64.	Specific vocational training (automechanic, etc.)	(0.6484)	4.316	17
	Composite		3.855	

Family Living

The largest group (24) of the curriculum items had a higher loading on the factor--family living than on any other factor.

Table 4.4 Summary of the factor loadings, means and ranks of curriculum items related to family living.

	Curriculum Element	Factor Loading	Mean	Rank
10.	The importance of strict compliance to safety rules and regulations	(0.4375)	4.329	16
11.	The problems related to earning, saving and spending money	(0.6260)	4.355	13

Table 4.4 (cont.)

	Curriculum Element	Factor Loading	Mean	Rank
12.	The need to understand the different roles played by members of the family unit	(0.7073)	3.368	56
13.	The performance of basic housekeeping tasks	(0.7454)	3.645	43
14.	The selection and care of family clothing	(0.7022)	3.526	51
15.	The safe and correct operation of household equipment	(0.7936)	3.724	40
16.	Planning meals	(0.7633)	3.605	45
17.	Serving food to family and guests stressing the proper table setting and simple rules of etiquette	(0.6776)	3.079	60
18.	Learning the proper storage and care of food	(0.7513)	3.526	52
19.	Acquiring the skills necessary for proper infant and child care	(0.7647)	3.987	27
20.	How to budget for family needs	(0.7295)	4.342	14
21.	Discussing the hidden costs involved in loans, installment buying and service charges	(0.5443)	4.013	25
22.	The importance of simple maintenance tasks and the repair of household items	(0.6796)	3.618	44
23.	Stressing the importance of life and hospitalization insurance	(0.5109)	3.763	35

Table 4.4 (cont.)

	Curriculum Element	Factor Loading	Mean	Rank
25.	The respect of laws and regulations made for the public good	(0.5119)	4.039	24
26.	Respecting private and public property rights	(0.5413)	4.066	23
29.	Learning about the services offered by public and private service organizations in the community	(0.3435)	3.789	37
30.	Understanding the procedures to follow in times of disaster and accident	(0.5596)	3.750	38
32.	The reason for and customs surrounding the celebration of holidays	(0.5244)	2.513	63
35.	Basic first aid	(0.4891)	3.776	36
39.	The types of communicable diseases and their control and prevention	(0.4284)	3.474	53
49.	Using functional arithmetic in cooking	(0.5453)	3.711	41
53.	The development of concepts of self related to personal abilities and limitations	(0.3821)	4.553	7
55.	A discussion related to the advantages and disadvantages of going steady	(0.3898)	3.289	58
	Composite		3.743	

Health and Hygiene

The six items which contained a higher loading on the factor health and hygiene than any other are contained in Table 4.5.

Table 4.5 Summary of the factor loadings, means and ranks of curriculum items related to health and hygiene.

	Curriculum Element	Factor Loading	Mean	Rank
33.	The role of health helpers in the community, (i.e., doctors, dentists)	(0.4765)	3.605	46
34.	The importance of proper exercise and rest to a person's physical health	(0.4282	3.921	29
36.	Sex Education	(0.6787)	4.197	20
37.	The cause and effects and means of prevention of venereal disease	(016042)	3.947	28
38.	The costs and effects of alcohol, narcotics and tobacco	(0.4637)	3.737	39
40.	Learning the habits of cleanliness related to proper body care including the prevention of bad breath and the use of deodorants	(0.4791)	4.210	19
	Composite		3.935	

Personality Traits

The three items contained in Table 4.6 loaded higher on the factor--personality traits than on any other factor.

Table 4.6 Summary of the factor loadings, means and ranks of curriculum items related to personality traits.

	Curriculum Elements	Factor Loading	Mean	Rank
56.	The importance of being punctual	(0.7809)	4.592	4
57.	Developing the ability to accept and profit from criticism	(0.7481)	4.526	6
58.	Teaching the value of being honest and trustworthy	(0.6924)	4.395	10
	Composite		4.500	

Academic Skills

The sixteen items contained in Table 4.7 loaded higher on the factor, academic skills than on any other factor. The highest ratings seemed to be given to those curriculum items related to the acquisition of mathematical skills. Three of the items were related to social studies type activities.

Table 4.7 Summary of the factor loadings, means and ranks of curriculum items related to academic skills.

	Curriculum Elements	Factor Loading	Mean	Rank
24.	Understanding governmental organization on the local, county, state, and federal level	(0.5654)	3.066	61

Table 4.7 (cont.)

	Curriculum Elements	Factor Loading	Mean	Rank
27.	Classroom activities designed to teach simple rules of parliamentary procedure	(0.7453)	2.316	64
28.	Participation in school-civic activities such as campaigns, elections and committees	(0.4999)	2.921	62
31.	Understanding the relationship between the payment of taxes and the receiving of public services	(0.4208)	3.434	55
41.	The basic number skills (i.e., addition, subtraction, etc.)	(0.4230)	4.368	12
42.	Counting and making change using real money	(0.4731)	4.632	2
43.	Developing an understanding of simple fractions	(0.6319)	3.605	47
44.	Measuring liquids and solids	(0.7511)	3.566	50
45.	The use of linear measures	(0.8390)	3.868	31
46.	The use of scales in weighing objects	(0.7486)	3.592	49
47.	The use of a clock and calendar	(0.4209)	4.421	5
48.	Developing concepts about temperature (i.e., a boiling, freezing, reading a thermometer)	(0.6532)	3.329	57
50.	The application of functional arithmetic in determing the costs of housing	(0.5476)	3.816	32

Table 4.7 (cont.)

	Curriculum Elements	Factor Loading	Mean	Rank
51.	Utilizing arithmetic in vocationally related areas	(0.4790)	4.289	18
52.	The recognition of familiar geometric shapes	(0.6407)	3.237	59
54.	The proper procedure to be followed in placing both personal and business telephone calls	(0.4465)	3.816	33
	Composite		3.642	

The composite mean scores contained in Tables 4.1--4.7 reveal that the respondents viewed all of the factor groupings as being valuable curriculum components to be included in a secondary level vocationally oriented curriculum for the handicapped. This finding is not surprising in light of the fact that all of these items were recommended by "experts" in the field.

The ranking of the curriculum items on the basis of their means was to show the relationship among items which were judged to be valuable curriculum components. A low rank should not, however, be taken as an indication that the curriculum element is not valuable.

The composite means for each group in rank order were:

1. Personality Traits (4.500)
2. Work Experience (4.266)
3. Pre-Vocational Skills (4.154)

4. Health and Hygiene (3.935)
5. Mechanical Skills (3.855)
6. Family Living (3.855)
7. Academics (3.642)

These composite means indicated that the respondents placed greater value on vocational type skills than on academic type skills. The respondents also indicated that the development of positive personality traits should be a primary aim of the curriculum.

Analyses of Testable Hypotheses

In order to determine whether the value score that the respondents placed on the items was reflected in the curriculum content in the school systems which they served, the following hypothesis was tested:

1. H_o There is no significant correlation between the value scores assigned to the curriculum items and the degree to which they are included in the curriculum.

To test the above hypothesis both the overall mean value score and the overall mean degree in curriculum score on each item were rank ordered (See Appendix A). A Spearman Rank Correlation was then performed.

The general formula for this statistic is given by the formula $r_s = 1 - \frac{6 \Sigma D_i^2}{N (N^2-1)}$ where D is the difference in ranking for each individual and N is the number of units ranked. Calculations based on the data contained in Appendix A yielded a Spearman r = .6559.

The test of significance for r_s when a large sample (N=10) is employed is given by $t = r_s\sqrt{\frac{N-2}{1-r_s^2}}$ with N-2 degrees of freedom. The tabled values of t are appropriate in this instance since N=64. The calculated value is t-6.84. The tabled value of t for 60 degrees of freedom and p=>.001 is 3.232. Accordingly, the null hypothesis is rejected. A significant correlation does exist between value scores and what the respondents thought was included in the curriculum.

The following twelve independent variables were selected which might affect a person's value score:

1. Type of agency in which employed. (i.e., educational versus rehabilitation).
2. Age of respondent
3. Educational level of respondent
4. Number of special education categories served.
5. The sex of the subject.
6. The number of years the special education-vocational rehabilitation cooperative agreement had been in effect.
7. The number of clients carried in the caseload.
8. The type of educational position the subject held.
9. Prior classroom experience with normal children on the part of the special education personnel.
10. Whether vocational rehabilitation personnel had prior special education training.
11. Past teaching experience of persons in the vocational rehabilitation population.
12. The existence of a formal curriculum guide.

Hypotheses 2-13 were developed to measure the impact of these independent variables upon each of the curriculum items. A series of ANOVA tests was developed utilizing the curriculum items as the dependent variables. Because of the possibility of covariance among the items a conservative critical value was selected. The overall alpha level was

set at .20 and the alpha level was divided by non-independent tests. $\frac{\alpha}{K} = \frac{.20}{64} = .003$. Therefore, the critical level established for rejection of the null hypothesis was p = .003.

Tables 4.8-4.11 represent summaries of the analyses of variance tests on which significant differences were found among the independent variables. The summary data on the individual ANOVA tests may be found in Appendix D.

2. H_o There are no significant differences in the value scores as assigned to the individual items by educational and vocational rehabilitation personnel.

The above hypothesis was tested by performing an analysis of variance on the value scores obtained on all sixty-four items. Table 4.8 lists the nine items on which the above null hypothesis of no difference was rejected. Those items yielding no significant F scores were dropped and are not reported.

Table 4.8 Summary data on ANOVA for mean value scores by educational and vocational rehabilitation personnel.

Curriculum Element	Factor	Educators N-43	Vocational Rehab. N=33	Level of Significance
5. The discussion of fringe benefits related to a job	PVE	3.790	3.030	p=.0005
16. Planning meals	FL	3.860	3.272	p=.002
19. Acquiring the skills necessary for proper infant and child care	FL	4.325	3.545	p=.001

Table 4.8 (cont.)

Curriculum Element	Factor	Educators N=43	Vocational Rehab. N=33	Level of Significance
20. How to budget for family needs	FL	4.604	4.000	p=.001
21. Discussing the hidden costs involved in loans, installment buying, and service charges	FL	4.348	3.575	p=.001
25. The respect of laws and regulations made for the public good	FL	4.382	3.696	p=.003
39. The types of communicable diseases, and their control and prevention	FL	3.744	3.121	p=.002
49. Using functional arithmenic in cooking	FL	4.000	3.333	p=.002
50. The application functional arithmetic in determining the costs of housing	A	4.093	3.454	p=.002

FL = Family Living
A = Academics
PVE= Pre-Vocational Education

The probability of each F ratio was computed rather than interpolating between entries in the table of F. However, an alpha level of .003 was used throughout the analysis as the critical level.

Examination of the items contained in Table 4.8 reveals that most of the items on which significant differences were obtained loaded higher on the factor--family living than on any other. The educators placed a higher mean value score on these items than vocational rehabilitation personnel. This finding seems to indicate that the emphasis of educators was directed toward a broader goal of life adjustment.

The respondents were divided into three categories according to age. The age categories were 25-34, 35-44, and 45 or over; category numbers were 38, 26, and 12, respectively. A series of ANOVA tests were performed utilizing the three age groupings as the independent variables and the value scores as the dependent variables. An adjustment was made for the unequal cell sizes in the ANOVA. Table 4.9 contains the summary data on the nine curriculum elements on which the above null hypothesis of no difference was rejected.

Table 4.9 Summary data for ANOVA of value scores by age of respondent.

Element	Factor	AGE			Leval of Significance
		24-34 N=38	35-44 N-26	45 or over N=12	
18. Learning the proper storage and care of food	FL	3.184	3.846	3.916	p=.003
24. Understanding governmental organization on local, county, state and federal level	A	2.736	3.500	3.166	p=.003

Table 4.9 (cont.)

Element	Factor	Age 24-34 N=38	Age 35-44 N=26	Age 45 or over N=12	Level of Significance
27. Classroom activities designed to teach simple rules of parliamentary procedure	A	1.973	2.769	2.416	p=.003
30. Understanding the procedures to follow in times of disaster and accident	FL	3.289	4.346	3.916	p=.005
32. The reason for and customs surrounding the celebration of holidays	FL	2.184	2.961	2.583	p=.002
35. Basic first aid	FL	3.368	4.230	4.083	p=.001
39. The types of communicable diseases and their control	FL	3.131	4.000	3.416	p=.005
44. Measuring liquids and solids	A	3.236	4.000	3.666	p=.002
49. Using functional arithmetic in cooking	FL	3.343	4.076	4.083	p=.002

FL = Family Living
A = Academics

Examination of the nine curriculum items, in Table 4.9, revealed that six of the items on which significant differences existed loaded heavily on the factor family living and three loaded heavily on academic skills. The fact

that the youngest aged group scored the lowest overall means on these items indicates that they do not feel as positive as the older groups do toward these family living and academic skill type curriculum elements.

4. H_o There are no significant differences in the value scores assigned to the individual items based on the sex of the respondent.

It was not possible to reject the null hypothesis of difference based on sex for any of the sixty-four curriculum items.

5. H_o There are no significant differences in the value scores placed on the curriculum components based upon the educational level of the respondents.

Table 4.10 contains the three items upon which the null hypotheses of no difference based on education level were rejected.

Table 4.10 Summary means and ANOVA on value scores according to the educational level of the respondents.

Element	Factor	Level of Education BA N-33	MA N=29	MA+30 N=14	Level of Significance
5. The discussion of fringe benefits related to a job	PVE	3.030	3.724	3.928	p=.001
19. Acquiring skills necessary for proper infant and child care	FL	3.545	4.275	4.428	p=.003
20. How to budget for family needs	FL	4.000	4.482	4.851	p=.002

PVE = Pre-Vocational Education
FL = Family Living

Two of the items contained in Table 4.10 loaded heaviest on the factor--family living and one item loaded heaviest on pre-vocational education.

An analysis of the categorical means of each of the three items in Table 4.10 shows that the respondents with only a bachelor's degree score the lowest mean response. As the educational level of the respondents increased the mean value score also increased on these items.

6. H_o There are no significant differences in the value scores which can be attributed to the length of time the special education-vocational rehabilitation cooperative agreement has been in effect.

For the purpose of testing the above hypothesis, the population was divided into four groups based on the age of their cooperative agreement. The first group came from agreements which were only one year old. The second from agreements which were two years old. The third group was drawn from programs which were three or four years old. The fifth group was from cooperative agreements which had been in existence five or more years. An ANOVA test was performed on each curriculum item.

None of the curriculum components approached the critical point $p = .003$ which was necessary for the rejection of the null hypothesis. Therefore, one may conclude that the length of time the agreement has been in effect does not affect the value scores placed on the curriculum elements.

7. H_o There are no significant differences in the value scores of the subjects which can be attributed to the number of clients in their caseload.

There was no evidence to suggest that the number of clients in the caseload affected the value scores of the respondents. None of the sixty-four items even approximated the .003 level of significance necessary for rejection.

8. H_o There are no significant differences in the value scores which can be attributed to the number of special education categories served in the co-operative agreement.

For the purpose of testing the above hypothesis the population was divided into three groups. The first group included those special education cooperatives which served only one or two categorical areas; the second group, those which served three or four categorical groups and finally, the last group included those serving more than four categorical groups. An ANOVA test was performed on each curriculum item with the critical level for rejection once again set at p = .003.

Table 4.11 ANOVA and mean values assigned to the curriculum elements based on the number of special education categories served.

Element	Factor	No. of Categories Served 1-2 N=25	3-4 N=20	More than 4 N=31	Level of Significance
20. How to budget for family needs	FL	4.800	4.200	4.064	p=.002

Table 4.11 (cont.)

Element	Factor	No. of Categories Served			Level of Significance
		1-2 N=25	3-4 N=20	More than 4 N=31	
25. The respect of laws and regulations made for the public good	FL	4.560	3.870	3.970	p=.001
33. The role of health helpers in the community (i.e., doctors, dentists)	FL	3.960	3.950	3.096	p=.002
49. Using functional arithmetic in cooking	FL	4.200	3.600	3.387	p=.003
50. The application of functional arithmetic in determining the costs of housing	A	4.320	3.700	3.483	p=.001

FL = Family Living
A = Academics

An examination of the curriculum elements that achieved statistical significance in Table 4.11 showed that four of the five items loaded heaviest on the factor--family living. Those respondents who worked with only one or two disability categories received the highest mean score. This might be explained by the fact that those agreements which only serve one or two categories usually emphasize serving

the retarded. Persons who are working with the retarded may be more concerned with family living type skills.

9. H_o There are no significant differences in the value scores placed on the curriculum components based upon the type of position held by the educators in the sample.

The above hypothesis was tested through a series of ANOVA tests on all sixty-four curriculum items with .003 as the critical level used for rejection of the null hypothesis. The educational respondents were divided into three groups. The first group was Type C teacher counselors of the mentally retarded. The second group was Type IV teacher counselors of the physically handicapped. The final group was classified as other and included persons from many diverse backgrounds including guidance counselors and diagnosticians (psychometrists).

The critical level necessary for rejection of the null hypothesis was not obtained on any of the sixty-four curriculum components.

10. H_o There are no significant differences on the value scores of the educators which can be attributed to prior experience in classroom teaching with normal children.

The above hypothesis was tested to determine whether prior classroom teaching experience with normal children significantly broadens values of teachers of the handicapped. An ANOVA was run on the educational population in the survey (N=43). The critical value as in other instances was set at

.003. None of the curriculum components approached the critical level necessary for rejection of the null hypothesis.

This outcome is surprising since one might expect that a regular class exposure would produce more emphasis upon basic reading and mathematical operations than upon occupational and vocational learnings.

11. H_o There are no significant differences in the value scores of the vocational rehabilitation personnel which can be attributed to training in special education.

The value scores of the vocational rehabilitation personnel (N=33) on the curriculum items were submitted to ANOVA tests in the same manner as the other variables to determine if the fact that they had one or more special education courses made a significant difference. None of the curriculum items attained the level of significance (.003) necessary to reject the null hypothesis.

Vocational rehabilitation personnel frequently have teaching experience in their background. It was felt that an analysis as to whether or not past teaching experience affected the value scores would be interesting, hence:

12. H_o There are no significant differences in the value scores assigned to the curriculum components by the vocational rehabilitation personnel which might be based on prior teaching experience.

It was impossible to reject the above null hypothesis in relation to any of the sixty-four curriculum items. The individual ANOVA tests revealed that none of the items even approximated the alpha level necessary for rejection.

13. H_o There are no significant differences in the value scores assigned to the curriculum items by the educators which might be attributed to whether or not they had a curriculum guide.

The value scores of the educators (N=43) on each curriculum item were submitted to an ANOVA test to determine if the school systems having a formal curriculum guide had a significant impact on those value scores. None of the sixty-four items attained the .003 level of significance necessary for rejection.

Summary

The results of the value score questionnaire were subjected to a factor analysis, more commonly referred to as a principle components analysis, in order to group the items for the purpose of discussion. The principle component analysis isolated seven factor groupings. An overall mean score was computed on each curriculum item, and a composite mean was computed for each factor grouping. The composite means for each factor group in rank order were:

1. Personality Traits (4.500)
2. Work Experience (4.266)
3. Pre-Vocational Skills (4.154)
4. Health & Hygiene (3.935)
5. Mechanical Skills (3.855)
6. Family Living (3.743)
7. Academic Skills (3.642)

The value scores assigned by the respondents on some of the curriculum items were significantly different based upon a consideration of the following variables.

1. Type of agency (i.e., educational versus rehabilitation)
2. Age of the respondent
3. Educational level
4. Number of special education categories served

The value scores of none of the curriculum components was affected to a significant degree by the following independent variables:

1. The sex of the subject
2. The number of years the special education-vocational rehabilitation cooperative agreement has been in effect
3. The number of clients carried in the caseload
4. The type of educational position the subject held
5. Prior classroom experience with normal children on the part of the special education personnel
6. Whether vocational rehabilitation personnel had prior special education training
7. Past teaching experience of persons in the vocational rehabilitation population
8. The existence of a formal curriculum guide

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

Summary

A recent trend for secondary level special education programs has been toward the development of a curriculum which will equip handicapped children with those skills and traits that will allow them to be socially and vocationally adequate in their adult life.

The purpose of this study was to determine which activities, experiences, and elements according to authorities in the field should be included in such a curriculum and to subject these activities, experiences and elements to the value judgement of educational and vocational rehabilitation personnel who have day-to-day contact with the children involved.

The review of the literature pointed out that there is very little objective data upon which one may rely to determine the relative importance of curriculum components to be included in a secondary level vocational oriented curriculum for the handicapped. It was necessary to construct

an instrument based upon the subjective opinions of authorities in the field. Educators and rehabilitation counselors, who were involved in the day-to-day operation of secondary level vocationally oriented programs for the handicapped, were asked to evaluate the items in the instrument to determine the relative values of the various curriculum components in a secondary program.

The subjects included in the study were educational and vocational rehabilitation personnel working in Michigan's Vocational Rehabilitation-Special Education Cooperative Agreement on the Intermediate School District level.

The 76 subjects identified for the study were asked to place a value scale of from one to five on 64 curriculum components. The 64 curriculum components had been selected for the study by a review of the literature and a pilot study.

The data were subjected to the following analyses:

1. A ranking of curriculum items according to their mean value score.
2. A correlation matrix was computed and a factor analysis was performed on the data to determine which curriculum items might be grouped under broad topic headings for the purpose of discussion.
3. A Spearman Rank Correlation was used to determine whether there was a relationship between what the respondents thought ought to be included in the

curriculum (the value scale questionnaire) and what they thought actually was included in the curriculum (degree in curriculum questionnaire).

4. A series of one way ANOVA tests were administered to determine if a number of independent variables significantly affected the value score placed on the different curriculum items by the respondents.
5. A discussion of the results obtained through these tests is developed in the following section.

Results

The Factor Analysis

The factor analysis used in this study isolated seven factors for the purpose of grouping the sixty-four curriculum items contained in this study.

1. Four curriculum components loaded heavily on the factor termed work experience with a composite mean of 4.266.
2. Eight curriculum items loaded heavily on the factor termed pre-vocational skills with a composite mean of 4.154.
3. Three items loaded heavily on the factor termed mechanical skills with a composite mean of 3.855.
4. Twenty-four curriculum components loaded heavily on the factor termed family living with a composite mean of 3.743.
5. Six items loaded heavily on the factor termed health and hygiene with a composite mean of 3.935.

6. Three curriculum items loaded heavily on the factor termed personality traits with a composite mean of 4.500.

7. Finally, sixteen items loaded heavily on the factor termed academic skills with a composite mean of 3.642.

Findings Related to Mean Rank

An analysis of the means on all sixty-four items resulted in the following findings:

The curriculum items on the basis of mean value scores were ranked in the following descending order:

Rank

1. Work experience outside the school for pay (O.J.T.).
2. Counting and making change using real money.
3. The importance of being punctual.
4. The development of concepts of self related to personal abilities and limitations.
5. Activities stressing the importance of good manners and social behavior on the job.
6. Developing the ability to accept and profit from criticism.
7. Identifying skills needed for different jobs.
8. Practicing in applying for a job by filling out application blanks and writing letters.
9. The use of a clock and calendar.
10. Teaching the value of being honest and trustworthy.
11. Use of job stations for job exposure where students rotate periodically.
12. The basic number skills (i.e., addition, subtraction, etc.)
13. The problems related to earning, saving, and spending money.
14. How to budget for family needs.
15. Surveying job opportunities in the community, utilizing telephone directories, newspaper advertisements, etc.
16. The importance of strict compliance to safety rules and regulations.
17. Specific vocational training (automechanic, etc.).
18. Utilizing arithmetic in vocationally related areas.

19. Learning habits of cleanliness relating to proper body care including the prevention of bad breath and the use of deodorants.
20. Sex education.
21. Field trips to possible sources of future employment.
22. Work experience in the school for pay.
23. Respecting private and public property rights.
24. The respect of laws and regulations made for the public good.
25. Discussing the hidden costs involved in loans, installment buying and service charges.
26. Reading related to following directions and acquiring vocabulary related to vocations.
27. Acquiring the skills necessary for proper infant and child care.
28. The cause and effects and means of prevention of venereal disease.
29. The importance of proper food, exercise, and rest to a person's physical health.
30. The consideration of the relationship of health to the job.
31. The use of linear measures such as: inch, foot, etc.
32. The application of functional arithmetic in determining the costs of housing.
33. The proper procedure to be followed in placing both personal and business telephone calls.
34. Work experience in the school for credit. (no pay)
35. Stressing the importance of life and hospitalization insurance.
36. Basic first aid.
37. Learning about the services offered by public and private service organizations in the community.
38. Understanding the procedures to follow in times of disaster and accident.
39. The cost and effects of alcohol, narcotics and tobacco.
40. The safe and correct operation of household equipment.
41. Using functional arithmetic in cooking.
42. Knowledge about and use of power tools.
43. The performance of basic housekeeping tasks.
44. The importance of simple maintenance tasks and the repair of household items.
45. Planning meals.
46. The role of health helpers in the community (i.e., doctors, dentists).
47. Developing an understanding of simple fractions.
48. The function and use of hand tools.
49. The use of scales in weighing objects.
50. Measuring liquids and solids.

51. The selection and care of family clothing.
52. Learning the proper storage and care of food.
53. The types of communicable diseases and their control and prevention.
54. The discussion of fringe benefits related to a job.
55. Understanding the relationship between the payment of taxes and the receiving of public service.
56. The need to understand the different roles played by members of the family unit.
57. Developing concepts about temperature (i.e., boiling, freezing, reading a thermometer.)
58. A discussion related to the advantages and disadvantages of going steady.
59. The recognition of familiar geometric shapes.
60. Serving food to family and guests stressing the proper table setting and simple rules of ettiquette.
61. Understanding governmental organization on the local, county, state, and federal level.
62. Participation in school-civic activities such as campaigns, elections, and committees.
63. The reason for and customs surrounding the celebration of holidays.
64. Classroom activities designed to teach simple rules of parliamentary procedure.

Findings in Relation to Independent Variables

An analysis of the Spearman rank order correlation contained in this study revealed that there was a significant correlation between what the subjects felt should be included in the curriculum as measured by the value score and what they thought actually existed in the curriculum as measured by the degree in curriculum score.

The independent variables that were investigated to ascertain their impact upon the value scores included age, sex, type of position held, educational level, training and experience, age of the cooperative agreement, number of clients carried in the caseload, number of categories served

and availability of a curriculum guide. The findings were:

1. Vocational rehabilitation personnel and educators did differ significantly in the value that they place on nine of the sixty-four curriculum items. The items upon which they differed were:

   a. Discussion of fringe benefits related to a job.
   b. Planning meals.
   c. Acquiring the skills necessary for proper infant and child care.
   d. How to budget for family needs.
   e. Discussing the hidden costs involved in loans, installment buying and service charges.
   f. Respect of laws and regulations made for the public good.
   g. Types of communicable diseases and their control and prevention.
   h. Using functional arithmetic in cooking.
   i. The application of functional arithmetic in determining the costs of housing.

2. Age was a significant factor affecting the value scores of nine of the sixty-four curriculum components. The components affected by age included:

   a. Learning proper storage and care of food.
   b. Understanding governmental organization on local, county, state and federal level.
   c. Classroom activities designed to teach simple rules of parliamentary procedure.
   d. Understanding the procedures to follow in time of disaster and accident.
   e. The reason for and customs surrounding the celebration of holidays.
   f. Basic first aid.
   g. The types of communicable diseases and their control.
   h. Measuring liquids and solids.
   i. Using functional arithmetic in cooking.

3. Educational level did make a significant difference in the value scores which the subjects assigned to

three of the curriculum items. These curriculum items were:

a. Discussion of fringe benefits related to a job.
b. Acquiring skills necessary for proper infant and child care.
c. How to budget for family needs.

4. The number of special education categories which the respondents served made a significant difference in the value scores which they assigned to five curriculum components:

a. How to budget for family needs.
b. Respect of laws and regulations made for the public good.
c. The role of health helpers in the community (i.e., doctors, dentists).
d. Using functional arithmetic in cooking.
e. The application of functional arithmetic in determining the costs of housing.

The overwhelming number (19 out of 26) of the curriculum items, on which significant differences were found based on the independent variables were heavily loaded on the factor of family living skills.

5. The following independent variables did not affect the value scores of the subjects:

a. The number of clients in the respondent's caseload.
b. Whether or not the respondent had prior classroom experience with normal children.
c. Whether or not the vocational rehabilitation respondents had special education training.
d. Whether or not the vocational rehabilitation personnel had prior teaching experience.
e. The length of time a cooperative agreement between special education and vocational rehabilitation had been in effect did not affect the value scores of the respondents.

Conclusions

A review of the findings contained in this study led to the following conclusions:

1. The high overall mean scores given by the respondents to the curriculum items recommended by the experts demonstrates a basic agreement that the vast majority of these items should be included in a secondary level vocationally oriented program for the handicapped. A look at Appendix A reveals that only three items out of the total of sixty-four received an overall mean value score of less than 3.0 on a five point scale.
2. Educators and vocational rehabilitation personnel were in basic agreement concerning the value of the curriculum items for inclusion in a secondary level vocationally oriented program for handicapped youth. There were fifty-five items on which no significant differences could be found between the value scores assigned by the educators and vocational rehabilitation personnel. Of the nine items on which statistically significant differences were found, both groups still rated the items above 3.0 on a five point scale.
3. The population considered curriculum items concerned with producing social and vocational independence as

more valuable than items related to teaching academic skills. The four factor groupings related to social and vocational independence had higher composite means than the factor group related to academic skills.

4. The respondents were not in agreement as to the value which should be placed on family living skills in the curriculum. Among the twenty-six items on which significant differences were found, based on the different independent variables, nineteen were grouped under the factor family living.

Recommendations

The recommendations contained in this section are the result of the value judgements contained in this study. There is no objective data to authenticate that the curriculum items are valid in relation to developing social and vocational independence.

On the basis of the data collected in the study, the following recommendations are made with regard to curriculum items which should be emphasized in developing a secondary level vocationally oriented program for the handicapped.

1. Work experience should be an integral component of the program. This experience should be outside the school whenever possible. An attempt should be made to rotate the students in different job stations. Wages should be paid for work rendered.

2. Pre-vocational skills should be taught in the classroom. Handicapped youth should be taught the process utilized in finding a job. They should be aware of the skills needed for different jobs.
3. Consideration should be given to including specific vocational training (automechanics, etc.) in the curriculum for handicapped youth.
4. In the area of family living skills, emphasis should be placed on specific home economic skills including: budgeting, cooking, proper infant and child care, planning meals, basic first aid, etc.
5. Emphasis should be placed on teaching basic mathematical skills. Children should be given an opportunity to use real money in counting and making change.

The results of this study suggested the following recommendations with regard to future research:

1. Research should be conducted to measure the usefulness of the curriculum items, contained in this study, in meeting the needs of independent living.
2. This study should be duplicated in other geographic regions of the United States to rule out attitudes which are unique to the State of Michigan.

BIBLIOGRAPHY

BIBLIOGRAPHY

Abele, L. W., Administrative and curricular provisions for the slow learner. School Review, 1951, 59, 420-426.

Baller, W. R., A study of the present status of a group of adults who, when they were in elementary schools were classified as mentally deficient. Genetic Psychological Monographs, 1936, 18 (3).

Barbe, W. B., Meeting the needs of exceptional children. Education, 1964, 84, 477.

Barker, B. W., Preparation of retarded clients and employers for on-the-job training and placement. American Journal of Mental Deficiency, 1953, 57, 580-586.

Bates, W. G., Trends in curriculum development for the mentally retarded. Selected Convention Papers, The Council for Exceptional Children, Washington, 1962, 26-29.

Behrmann, E. H., Planning the curriculum. National Catholic Education Association Bulletin, 1960, 57, 474-479.

Bernstein, J., Mental retardation: New prospects for employment. Journal of Rehabilitation, 1966, 32, 16-17.

Blackhurst, A. E., Technology in special education: Some implications. Exceptional Children, 1965, 31, 449-456.

Brice, C. R., Vocational programming for the retarded. American Vocational Journal, 1966, 41, 23-26.

Campbell, L. W., Work study programs: A socioeconomic must. Sacramento, California, State Department of Education, Bureau for Educationally Handicapped and Mentally Exceptional Children, 1968.

_____. Preliminary report of California's rehabilitation cooperative school program. Sacramento, California State Department of Education, Bureau for Educationally Handicapped and Mentally Exceptional Children.

Charles, D. C., Ability and accomplishment of persons earlier judged mentally deficient. Genetic Psychological Monographs, 1953, 47, 3-71.

Cohen, J. S., Employer attitudes toward hiring mentally retarded individuals. American Journal of Mental Deficiency, 1963, 705-713.

Delp, H. A., Goals for the mentally retarded. Training School Bulletin, 1957, 53, 248-256.

DiMichael, S. G., The state federal program of vocational rehabilitation of the mentally retarded. American Journal of Mental Deficiency, 1949, 54, 230-236.

_____. Providing full vocational opportunities for retarded adolescents and adults. Journal of Rehabilitation, 1964, 30.

Deno, E., Community coordinated effort in vocational training for the retarded. Exceptional Children, 1960, 27, 166-172.

Denny, R. R. and Harris, J. N., A work study program for slow learners. American School Board Journal, 1963, 19-20.

Doll, E. A., Occupational education for the adolescent mentally deficient in a school program. Exceptional Children, 1958, 25, 51-53.

Doyle, P., New horizons in rehabilitation of the mentally ill and retarded. Journal of Rehabilitation, 1965, 31, 14-15, 70-71.

Dunn, L. M., Exceptional children in the schools, New York: Holt, Rinehart and Winston, 1963.

Eskridge, C. S. and Partridge, D. L., Vocational rehabilitation for exceptional children through special education. Exceptional Children, 1963, 29, 452-458.

Erickson, J. J., Current trends and practices in the education of the mentally retarded. Educational Administration and Supervision, 1958, 44, 277-308.

Featherstone, W. B., Teaching the slow learner. New York: Teacher's College, 1951.

Frankel, M. G., et al, Functional teaching of the mentally retarded, Springfield, Illinois: Charles C. Thomas, 1966.

Fudell, S. E., Southern Regional Education Board, Atlanta, Georgia and Peck, J. R., Ph.D. University of Texas, Austin Occupational education units for mentally retarded secondary school students. Report on Handicapped Children Project, 1964.

Fusfeld, I. S., A handbook of readings in the education of the deaf and post-school implications. Springfield, Illinois: Charles C. Thomas, 1967.

Galazan, M. M. and Lenard, H. M. Project Directors, An evaluation study for the mentally retarded during their last year in public school. Research and Demonstration Project No. 404, Final Project Report, September, 1959 October, 1964, by the Jewish Vocational Service, Milwaukee, Wisconsin, and the Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare.

Garrison, I. K., A developmental school program for educable mentally handicapped. Journal of Mental Deficiency, 1953, 57, 554-564.

Garrison, K. C. and Force, D. G., The psychology of exceptional children. New York: The Ronald Press, 1959.

Garton, M. D., Teaching the educable mentally retarded. Springfield, Illinois: Charles C. Thomas, 1964.

Gehrke, A. W., How the state helps retarded students, Minnesota Journal of Education, 1966, 46, 35-36.

Goldstein, H. and Seigel, D., A curriculum guide for teachers of the educable mentally handicapped. Springfield, Illinois: Superintendent of Public Instruction, 1958.

Gottwald, H. L., Factors effecting collaboration between school and vocational rehabilitation programs for the mentally retarded. Cooperative Research Project No. 5-115 Eastern Michigan University, Ypsilanti, 1965.

Harvey, J., McMillan, F., and Ebersole, L., Special class curriculum and environment and vocational rehabilitation of mentally retarded young adults. Research and Demonstration Project No. RD. 842 Final Report, September 1961--May, 1964.

Heck, A. O., The education of exceptional children. New York: McGraw-Hill.

Horn, J. L., The education of exceptional children. New York: The Century Company, 1924.

Ingham, C. P., Education of the slow learning child. New York: The Ronald Press, 1953.

Kennedy, R. J., The social adjustment of morons in a Connecticut city, Hartford: Southbury Training Schools, Social Service Department, 1948.

Kirk, S. A., In Vocational training and rehabilitation of exceptional children. Proceedings of the 1957 Spring Conference of the Woods Schools held in Chicago, May 10 and 11. (Langhorne Penn: The Woods Schools for Exceptional Children, 1957).

Kokaska, C., The vocational preparation of the educable mentally retarded, Ypsilanti: Eastern Michigan University, 1968.

Kolstoe, O. P. and Frey, R. M., A high school work study program for mentally subnormal students, Carbondale, Illinois: Southern Illinois University Press, 1965.

Kruger, D. H., Trends in service employment: Implications for the educable mentally retarded. Exceptional Children, 1963, 167-172.

Lemee, H., Vocation education for the atypical child. School and Community, 1966, 52, 18-19.

Levinson, A., The mentally retarded child, New York: John Day Co., 1952.

Lewis, P. F., A cooperative education/rehabilitation work-study program for the educable mentally retarded: The Essex Plan. Final Report of Project R.D.--1743, Vocational Rehabilitation Administration Department of Health, Education, and Welfare, September, 1964--August, 1967.

Marshall, J. E. in Cooperative agreements between special education and rehabilitation services in the west, Selected Papers from a Conference on Cooperative Agreement, February, 1968, in Las Vegas, Nevada. Western Interstate Commission for Nigher Education, University East Campus, Boulder, Colorado.

Mayo, L. W., Philosophy and recommendations of the president's panel on mentally retarded relations to education, vocational rehabilitation and training. Exceptional Children, 1963, 29, 425-430.

McPherson, H., and Stephens, T. M., Developing a work-experience program for slow learning youth. A Report of a Three-Year Extension and Improvement Project of the Ohio Bureau of Vocational Rehabilitation in the Dayton Public Schools, 1964.

Michigan Department of Education Division of Vocational Rehabilitation. "Discussion of Vocational rehabilitation and special education: Summary of presentations and discussion". August 15, 1968.

Michigan Department of Education, Division of Special Education, "Suggested outline and model cooperative agreement". March, 1968.

Michigan State University, Agricultural Experiment Station, Stat Series Description No. 13, One way analysis of variance with unequal number of replication permitted. April 1967.

_____, Computer Institute for Social Science Research, Technical Report No. 34 Factor Analysis, October, 1967.

Oppenheim, A. N., Questionnaire design and attitude measurement, New York: Basic Books, Inc., 1966.

Peck, J. R., The work study program--A critical phase. Education and Training of the Mentally Retarded, 1965, 1 (2), 68-74.

_____, The Marbridge Plan: A Texas experiment in habilitation for mentally retarded youth. Exceptional Children, 1958, 24, 346-350.

Peck, J. R. and Stevens, W. B., Success of young adult male retardates. Report on Cooperative Research Project No. 1533. February, 1962--January, 1964.

Peterson, L. and Smith, L. L., The post-school adjustment of educable mentally retarded adults with that of adults of normal intelligence. Exceptional Children, 1960, 26, 404-408.

Phelps, H. R., Post school adjustment of mentally retarded children in select Ohio cities. Exceptional Children, 1956, 23, 58-62.

Phelps, W. R., Attitudes related to employment of the mentally retarded. Master's Thesis, Marshall University, 1963.

Sneff, W. R., A curriculum for the mentally retarded young adult. Springfield, Illinois: Charles C. Thomas, 1962.

Syden, M., Preparation for work: An aspect of the secondary school's curriculum for mentally retarded youth. Exceptional Children, 1962, 28, 325-332.

Telford, C. W., and Sawrey, J. M., The exceptionan individual Englewood Cliffs, N. J.: Prentice Hall, 1967.

Virginia Department of Education, Department of Special Education, States with Special Education--Vocational Rehabilitation Agreements, mimeo.

Wakefield, R., Work experience for the mentally retarded in Santa Monica. National Association of Secondary School Principals Bulletin, 1962, 46, 217-219.

Wallin, J. E., Education of mentally handicapped children. New York: Harper, 1955.

Warren, F. G., Ratings of employed and unemployed mentally handicapped males on personality and work factors. American Journal of Mental Deficiency, 1961, 65, 629-633.

Weber, E. W., Educable and trainable mentally retarded children. Springfield, Illinois: Charles C. Thomas, 1962.

West, J. A. and Hosfetter, C., A cooperative program of special education vocational rehabilitation bridging the gap between school and employment. Final Report of Research and Demonstration Project No. R.D.--771. Oklahoma Rehabilitation Service, Division of the State Board for Vocational Education and Oklahoma City Schools, 1964.

Williamson, L. C., Nationwide categorized variables of state agreements/plans/guidelines in the current school work program concept. Madison, Wisconsin: The University of Wisconsin, December, 1967.

APPENDICES

APPENDIX A

SUMMARY OF THE MEAN SCORES AND RANKS OF CURRICULUM ELEMENTS CONSIDERED FOR A VOCATIONALLY ORIENTED SECONDARY CURRICULUM FOR THE HANDICAPPED

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SUMMARY OF THE MEAN SCORES AND RANKS OF CURRICULUM ELEMENTS CONSIDERED FOR A VOCATIONALLY ORIENTED SECONDARY CURRICULUM FOR THE HANDICAPPED

Table 1. Summary of the mean scores and ranks of curriculum elements considered for a vocationally oriented secondary curriculum for the handicapped.

Element	DEGREE IN CURRICULUM N-43		VALUE N=76	
	Mean	Rank	Mean	Rank
1. Surveying job opportunities in the community, utilizing telephone directories, newspaper advertisements, etc.	3.289	15	4.342	15
2. Identifying skills needed for different jobs.	3.316	14	4.474	3
3. Practicing in applying for a job by filling out application blanks and writing letters.	3.421	10	4.461	4
4. Reading related to following directions and acquiring vocabulary related to vocations.	3.158	22	4.000	26
5. The discussion of fringe benefits related to a job.	2.974	27	3.461	54
6. Field trips to possible sources of future employment.	2.816	37	4.158	21
7. The consideration of the relationship of health to the job.	2.921	30	3.895	30

8. Activities stressing the importance of good manners and social behavior on the job.	3.553	7	4.539	8
9. The function and use of hand tools.	2.789	39	3.592	48
10. The importance of strict compliance to safety rules and regulations.	3.368	12	4.329	16
11. The problems related to earning, saving, and spending money.	3.579	6	4.355	13
12. The need to understand the different roles played by members of the family unit.	2.684	49	3.368	56
13. The performance of basic housekeeping tasks.	2.842	35	3.645	43
14. The selection and care of family clothing.	2.816	38	3.526	51
15. The safe and correction operation of household equipment.	2.605	52	3.724	40
16. Planning meals.	2.921	29	3.605	45
17. Serving food to family and guests stressing the proper table setting and simple rules of etiquette.	2.684	47	3.079	60
18. Learning the proper storage and care of food.	2.605	53	3.526	52
19. Acquiring the skills necessary for proper infant and child care.	2.710	43	3.987	27
20. How to budget for family needs.	3.132	23	4.342	14
21. Discussing the hidden costs involved in loans, installment buying and service charges.	2.947	28	4.013	25
22. The importance of simple maintenance tasks and the repair of household items.	2.526	56	3.618	44

23. Stressing the importance of life and hospitalization insurance.	2.447	57	3.763	35
24. Understanding governmental organization on the local, county, state, and federal level.	2.895	31	3.066	61
25. The respect of laws and regulations made for the public good.	3.184	17	4.039	24
26. Respecting private and public property rights.	3.447	9	4.066	23
27. Classroom activities designed to teach simple rules of parliamentary procedure.	2.053	64	2.316	64
28. Participation in school-civic activities such as campaigns, elections, and committees.	2.316	62	2.921	62
29. Learning about the services offered by public and private service organizations in the community.	2.631	51	3.789	37
30. Understanding the procedures to follow in times of disaster and accident.	2.868	32	3.750	38
31. Understanding the relationship between the payment of taxes and the receiving of public services.	2.658	50	3.434	55
32. The reason for and customs surrounding the celebration of holidays.	2.421	58	2.513	63
33. The role of health helpers in the community. (i.e., doctors, dentists).	2.842	34	3.605	46
34. The importance of proper food, exercise, and rest to a person's physical health.	3.158	21	3.921	29

35. Basic first aid.	2.684	45	3.776	36
36. Sex education.	2.605	54	4.197	20
37. The cause and effects and means of prevention of venereal disease.	2.132	63	3.947	28
38. The cost and effects of alcohol, narcotics and tobacco.	2.710	44	3.737	39
39. The types of communicable diseases, and their control and prevention.	2.368	61	3.474	53
40. Learning habits of cleanliness relating to proper body care including the prevention of bad breath and the use of deodorants.	3.316	13	4.210	19
41. The basic number skills (i.e., addition, subtraction, etc.).	3.947	1	4.368	12
42. Counting and making change using real money.	3.684	5	4.632	2
43. Developing an understanding of simple fractions.	3.184	19	3.605	47
44. Measuring liquids and solids.	3.000	26	3.566	50
45. The use of linear measures such as: inch, foot, etc.	3.184	20	3.868	31
46. The use of scales in weighing objects.	3.395	11	3.592	49
47. The use of a clock and calendar	3.816	2	4.421	5
48. Developing concepts about temperature (i.e., boiling, freezing, reading a thermometer.	2.763	40	3.329	57
49. Using functional arithmetic in cooking.	3.027	25	3.711	41
50. The application of functional arithmetic in determining the costs of housing.	2.684	48	3.816	32

51. Utilizing arithmetic in vocationally related areas.	3.105	24	4.289	18
52. The recognition of familiar geometric shapes.	2.605	55	3.237	59
53. The development of concepts of self related to personal abilities and limitations.	3.263	16	4.553	7
54. The proper procedure to be followed in placing both personal and business telephone calls.	2.737	42	3.816	33
55. A discussion related to the advantages and disadvantages of going steady.	2.421	59	3.289	58
56. The importance of being punctual.	3.737	4	4.592	6
57. Developing the ability to accept and profit from criticism.	3.184	18	4.526	9
58. Teaching the value of being honest and trustworthy.	3.526	8	4.395	10
59. Work experience in the school for pay.	2.684	46	4.131	22
60. Work experience outside the school for pay (O.J.T.)	3.763	3	4.750	1
61. Work experience in the school for credit. (no pay)	2.842	33	3.803	34
62. Use of job stations for job exposure where students rotate periodically.	2.368	60	4.382	11
63. Knowledge about and use of power tools.	2.816	36	3.658	42
64. Specific vocational training (automechanic, etc.)	2.737	41	4.316	17

APPENDIX B

PERSONAL DATA AND CURRICULUM QUESTIONNAIRE

APPENDIX B

PERSONAL DATA

1. Code No. _____ Date _____

2. School District _____ Age___ Sex M__ F__

3. Position Type C (MR)____Type IV (PH)___Rehab. Couns.__

   Type A (MR)___H.S. Guid. Couns.__Other (Specify)_____

4. Approximately what percentage of your time is spent in each of the following areas:
   a. Classroom teaching _____%
   b. Consulting with teachers_____%
   c. Administration _____%
   d. Clerical duties _____%
   e. Rehabilitation activities (Job placement etc.)
   f. Other (Specify)_____ _____%

5. Highest Educ. level attained BA/BS____ BS+15____ MA/M.Ed._____ MA+30____ Ed.S. ____

6. What was your undergraduate major(s) _____

7. What was your graduate major(s) _____

8. Have you ever held a teaching position in a classroom with normal children? Yes___ No___ How many years____

9. Have you ever held a teaching position in a classroom with handicapped children? Yes___ No___ How many years____

10. Have you ever held a full time position in the area of vocational placement and/or counseling since you received your Bachelor's degree: Yes___ No___ How long_____

11. How long has the cooperative agreement been in effect in your district _____

12. How many children are you servicing in your current program/caseload _____

13. How many children are you servicing in each of the handicapped areas:

    E.M.R.____ T.M.R.____ Em. Dost.____Bline and Vis. Hand.____ Deaf and Hard of Hearing____ Phy. Hand.____ Otherwise Phys. Hand. (Health Problems)____

14. Does either your Intermediate School District of your Local School Districts have a curriculum guide for secondary level and/or vocationally oriented special education programs? Yes____ No____

CURRICULUM QUESTIONNAIRE

Directions:

The following activities and experiences are suggested as a possible nucleus upon which a vocationally oriented curriculum for the handicapped might be formed. Would you please evaluate these activities in relation to the value that you personally place on each of these elements as a necessary part of the curriculum for handicapped children?

Note: Your answers need not bear any relationahip to the curriculum currently being offered in the local school districts served by you.

You may answer this question by circling the value you place on it:

1	2	3	4	5
No Value	Very Little Value	Some Value	Valuable	Extremely Valuable

Example:

1. Understanding rules of grammar in order to punctuate sentences properly. 1 (2) 3 4 5

The interpretation of the above then would be that you, personally, think it has very little value in meeting the needs of handicapped children.

Elements	Value				
	No Value	Little Value	Some Value	Valuable	Very Valuable
1. Surveying job opportunities in the community, utilizing telephone directories, newspaper advertisements, etc.	1	2	3	4	5
2. Identifying skills needed for different jobs.	1	2	3	4	5
3. Practicing in applying for a job by filling out application blanks and writing letters.	1	2	3	4	5
4. Reading related to following directions and acquiring vocabulary related to vocations.	1	2	3	4	5
5. The discussion of fringe benefits related to a job.	1	2	3	4	5
6. Field trips to possible sources of future employment.	1	2	3	4	5
7. The consideration of the relationship of health to the job.	1	2	3	4	5
8. Activities stressing the importance of good manners and social behavior on the job.	1	2	3	4	5
9. The function and use of hand tools.	1	2	3	4	5
10. The importance of strict compliance to safety rules and regulations.	1	2	3	4	5
11. The problems related to earning, saving, and spending money.	1	2	3	4	5
12. The need to understand the different roles played by members of the family unit.	1	2	3	4	5
13. The performance of basic housekeeping tasks.	1	2	3	4	5
14. The selection and care of family clothing.	1	2	3	4	5

Elements		Value				
		No Value	Little Value	Some Value	Valuable	Very Valuable
15.	The safe and correct operation of household equipment.	1	2	3	4	5
16.	Planning meals.	1	2	3	4	5
17.	Serving of food to family and guests stressing the proper table setting and simple rules of etiquette.	1	2	3	4	5
18.	Learning the proper storage and care of food.	1	2	3	4	5
19.	Acquiring the skills necessary for proper infant and child care.	1	2	3	4	5
20.	How to budget for family needs.	1	2	3	4	5
21.	Discussing the hidden costs involved in loans, installment buying, and service charges.	1	2	3	4	5
22.	The importance of simple maintenance tasks and the repair of household items.	1	2	3	4	5
23.	Stressing the importance of life and hospitalization insurance.	1	2	3	4	5
24.	Understanding governmental organization on the local, county, state, and federal level.	1	2	3	4	5
25.	The respect of laws and regulations made for the public good.	1	2	3	4	5
26.	Respecting private and public property rights.	1	2	3	4	5
27.	Classroom activities designed to teach simple rules of parliamentary procedure.	1	2	3	4	5
28.	Participation in school-civic activities such as campaigns, elections, and committees.	1	2	3	4	5

Elements		Value				
		No Value	Little Value	Some Value	Valuable	Very Valuable
29.	Learning about the services offered by public and private service organizations in the community.	1	2	3	4	5
30.	Understanding the procedures to follow in times of disaster and accident.	1	2	3	4	5
31.	Understanding the relationship between the payment of taxes and the receiving of public services.	1	2	3	4	5
32.	The reason for and customs surrounding the celebration of holidays.	1	2	3	4	5
33.	The role of health helpers in the community (i.e., doctors, dentists).	1	2	3	4	5
34.	The importance of proper food, exercise, and rest to a person's physical health.	1	2	3	4	5
35.	Basic first aid.	1	2	3	4	5
36.	Sex education.	1	2	3	4	5
37.	The causes, effects, and means of prevention of venereal disease.	1	2	3	4	5
38.	The cost and effects of alcohol, narcotics, and tobacco.	1	2	3	4	5
39.	The types of communicable diseases and their control and prevention.	1	2	3	4	5
40.	Learning habits of cleanliness relating to proper body care including the prevention of bad breath and the use of deodorants.	1	2	3	4	5
41.	The basic number skills (i.e., addition, subtraction, etc.).	1	2	3	4	5
42.	Counting and making change using real money.	1	2	3	4	5

Elements		Value				
		No Value	Little Value	Some Value	Valuable	Very Valuable
43.	Developing an understanding of simple fractions.	1	2	3	4	5
44.	Measuring liquids and solids.	1	2	3	4	5
45.	The use of linear measures such as: inch, foot, etc.	1	2	3	4	5
46.	The use of scales in weighing objects.	1	2	3	4	5
47.	The use of a clock and calendar.	1	2	3	4	5
48.	Developing concepts about temperature (i.e., boiling, freezing, reading a thermometer).	1	2	3	4	5
49.	Using functional arithmetic in cooking.	1	2	3	4	5
50.	The application of functional arithmetic in determining the costs of housing.	1	2	3	4	5
51.	Utilizing arithmetic in vocationally related areas.	1	2	3	4	5
52.	The recognition of familiar geometric shapes.	1	2	3	4	5
53.	The development of concepts of self related to personal abilities and limitations.	1	2	3	4	5
54.	The proper procedure to be followed in placing both personal and business telephone calls.	1	2	3	4	5
55.	A discussion related to the advantages and disadvantages of going steady.	1	2	3	4	5
56.	The importance of being punctual.	1	2	3	4	5
57.	Developing the ability to accept and profit from criticism.	1	2	3	4	5
58.	Teaching the value of being honest and trustworthy.	1	2	3	4	5

Elements	Value				
	No Value	Little Value	Some Value	Valuable	Very Valuable
59. Work experience in the school for pay.	1	2	3	4	5
60. Work experience outside the school for pay (O.J.T.).	1	2	3	4	5
61. Work experience in the school for credit (no pay).	1	2	3	4	5
62. Use of job stations for job exposure where students rotate periodically.	1	2	3	4	5
63. Knowledge about and use of power tools.	1	2	3	4	5
64. Specific vocational training (auto mechanic etc.).	1	2	3	4	5

Please go back and make sure you scored each item.

Elements	Degree in Curriculum				
	Not at All	Mild	Moderate	Extensive	Very Extensive
1. Surveying job opportunities in the Community, utilizing telephone directories, newspaper advertisements, etc.	1	2	3	4	5
2. Identifying skills needed for different jobs.	1	2	3	4	5
3. Practicing in applying for a job by filling out application blanks and writing letters.	1	2	3	4	5
4. Reading related to following directions and acquiring vocabulary related to vocations.	1	2	3	4	5
5. The discussion of fringe benefits related to a job.	1	2	3	4	5
6. Field trips to possible sources of future employment.	1	2	3	4	5
7. The consideration of the relationship of health to the job.	1	2	3	4	5
8. Activities stressing the importance of good manners and social behavior on the job.	1	2	3	4	5
9. The function and use of hand tools.	1	2	3	4	5
10. The importance of strict compliance to safety rules and regulations.	1	2	3	4	5
11. The problems related to earning, saving, and spending money.	1	2	3	4	5
12. The need to understand the different roles played by members of the family unit.	1	2	3	4	5
13. The performance of basic housekeeping tasks.	1	2	3	4	5
14. The selection and care of family clothing.	1	2	3	4	5

Elements		Degree in Curriculum				
		Not at All	Mild	Moderate	Extensive	Very Extensive
15.	The safe and correct operation of household equipment.	1	2	3	4	5
16.	Planning meals.	1	2	3	4	5
17.	Serving of food to family and guests stressing the proper table setting and simple rules of etiquette.	1	2	3	4	5
18.	Learning the proper storage and care of food.	1	2	3	4	5
19.	Acquiring the skills necessary for proper infant and child care.	1	2	3	4	5
20.	How to budget for family needs.	1	2	3	4	5
21.	Discussing the hidden costs involved in loans, installment buying, and service charges.	1	2	3	4	5
22.	The importance of simple maintenance tasks and the repair of household items.	1	2	3	4	5
23.	Stressing the importance of life and hospitalization insurance.	1	2	3	4	5
24.	Understanding governmental organization on the local, county, state, and federal level.	1	2	3	4	5
25.	The respect of laws and regulations made for the public good.	1	2	3	4	5
26.	Respecting private and public property rights.	1	2	3	4	5
27.	Classroom activities designed to teach simple rules of parliamentary procedure.	1	2	3	4	5
28.	Participation in school-civic activities such as campaigns, elections, and committees.	1	2	3	4	5

Elements		Degree in Curriculum				
		Not at All	Mild	Moderate	Extensive	Very Extensive
29.	Learning about the services offered by public and private service organizations in the community.	1	2	3	4	5
30.	Understanding the procedures to follow in times of disaster and accident.	1	2	3	4	5
31.	Understanding the relationship between the payment of taxes and the receiving of public services.	1	2	3	4	5
32.	The reason for and customs surrounding the celebration of holidays.	1	2	3	4	5
33.	The role of health helpers in the community (i.e., doctors, dentists).	1	2	3	4	5
34.	The importance of proper food, exercise, and rest to a person's physical health.	1	2	3	4	5
35.	Basic first aid.	1	2	3	4	5
36.	Sex education.	1	2	3	4	5
37.	The causes, effects, and means of prevention of venereal disease.	1	2	3	4	5
38.	The cost and effects of alcohol, narcotics, and tobacco.	1	2	3	4	5
39.	The types of communicable diseases and their control and prevention.	1	2	3	4	5
40.	Learning habits of cleanliness relating to proper body care including the prevention of bad breath and the use of deodorants.	1	2	3	4	5
41.	The basic number skills (i.e., addition, subtraction, etc.).	1	2	3	4	5
42.	Counting and making change using real money.	1	2	3	4	5

Elements	Degree in Curriculum				
	Not at All	Mild	Moderate	Extensive	Very Extensive
43. Developing an understanding of simple fractions.	1	2	3	4	5
44. Measuring liquids and solids.	1	2	3	4	5
45. The use of linear measures such as: inch, foot, etc.	1	2	3	4	5
46. The use of scales in weighing objects.	1	2	3	4	5
47. The use of a clock and calendar.	1	2	3	4	5
48. Developing concepts about temperature (i.e., boiling, freezing, reading a thermometer).	1	2	3	4	5
49. Using functional arithmetic in cooking.	1	2	3	4	5
50. The application of functional arithmetic in determining the costs of housing.	1	2	3	4	5
51. Utilizing arithmetic in vocationally related areas.	1	2	3	4	5
52. The recognition of familiar geometric shapes.	1	2	3	4	5
53. The development of concepts of self related to personal abilities and limitations.	1	2	3	4	5
54. The proper procedure to be followed in placing both personal and business telephone calls.	1	2	3	4	5
55. A discussion related to the advantages and disadvantages of going steady.	1	2	3	4	5
56. The importance of being punctual.	1	2	3	4	5
57. Developing the ability to accept and profit from criticism.	1	2	3	4	5

Elements	Degree in Curriculum				
	Not at All	Mild	Moderate	Extensive	Very Extensive
58. Teaching the value of being honest and trustworthy.	1	2	3	4	5
59. Work experience in the school for pay.	1	2	3	4	5
60. Work experience outside the school for pay (O.J.T.).	1	2	3	4	5
61. Work experience in the school for credit (no pay).	1	2	3	4	5
62. Use of job stations for job exposure where students rotate periodically.	1	2	3	4	5
63. Knowledge about and use of power tools.	1	2	3	4	5
64. Specific vocational training (auto mechanic etc.).	1	2	3	4	5

Please go back and make sure you scored each item.

APPENDIX C

FACTOR ANALYSIS OF THE VALUE SCALE QUESTIONNAIRE

APPENDIX C

ROTATED FACTOR LOADINGS

	1	2	3	4	5	6	7
1	0.1630	-0.1250	0.0300	-0.2111	0.5178	-0.0092	-0.0656
2	-0.0511	-0.2477	-0.0784	-0.1222	0.4990	0.1476	-0.3570
3	0.2214	-0.0503	0.2161	-0.4946	0.3482	-0.0074	-0.2206
4	0.2875	-0.1326	-0.0170	-0.3960	0.3824	-0.3612	-0.0544
5	0.4346	-0.2400	0.1899	-0.0206	-0.3303	-0.2841	-0.0732
6	0.2218	-0.2579	0.2834	0.0169	0.4721	0.1709	-0.3382
7	0.1108	-0.0469	0.1200	-0.0724	0.6908	0.1576	-0.0035
8	0.2030	0.0778	0.1444	-0.4267	0.3985	0.3314	-0.0811
9	0.3504	-0.2078	0.2921	0.0058	0.0993	-0.0459	-0.5649
10	0.4375	-0.0268	0.0360	-0.3089	0.3441	0.2059	0.0197
11	0.6260	0.0052	0.2695	-0.2088	0.1135	0.1850	0.2515
12	0.7073	-0.1498	0.1860	-0.2180	0.0801	-0.1450	0.0301
13	0.7454	-0.0078	0.0335	-0.3110	0.0020	0.0734	0.0205
14	0.7022	-0.0272	0.1501	-0.3455	0.0189	0.1638	-0.0092
15	0.7936	-0.1511	0.0828	-0.2648	0.0951	0.1623	-0.0038
16	0.7633	-0.0913	-0.2083	-0.1419	0.1342	-0.0283	-0.1063
17	0.6776	-0.1574	0.0679	-0.0687	0.0239	0.2067	-0.0498
18	0.7513	-0.1152	-0.0605	-0.2090	0.1704	0.1851	-0.2214
19	0.7647	-0.0849	0.0410	-0.1483	0.1296	0.1088	-0.0032
20	0.7295	-0.0744	-0.0413	-0.0581	0.2535	0.2882	-0.0226
21	0.5443	-0.2070	0.1193	0.1082	0.4801	0.0756	0.0547
22	0.6796	-0.1969	0.0077	-0.0605	0.2470	0.1769	-0.2103
23	0.5109	-0.2535	0.2746	0.0124	0.3879	0.1556	0.1294
24	0.4873	-0.5654	0.0363	-0.0054	0.2937	0.0621	-0.0325
25	0.5119	-0.1555	0.0335	-0.2668	0.4707	0.1007	0.3059

	1	2	3	4	5	6	7
26	0.5413	-0.1450	-0.1189	-0.1909	0.5052	0.1614	0.1917
27	0.3170	-0.7453	0.1664	0.0106	-0.0513	0.0195	-0.0822
28	0.2695	-0.4999	0.0895	0.0127	0.2381	-0.0926	-0.0133
29	0.3435	-0.2606	0.2938	-0.1557	0.2827	0.0889	0.0348
30	0.5596	-0.3564	-0.1467	-0.1470	0.3647	0.1346	-0.0579
31	0.5244	-0.4208	0.0732	-0.0122	0.3310	-0.0984	0.2089
32	0.5768	-0.5361	0.0135	-0.0517	-0.0169	0.0169	0.2787
33	0.4765	-0.3607	0.0491	-0.3922	0.1920	-0.0932	0.2484
34	0.4282	-0.3155	0.0797	-0.3789	0.1782	0.0452	0.3215
35	0.4891	-0.4076	-0.0153	-0.3540	0.3372	0.0436	0.0462
36	0.2648	-0.0118	-0.0491	-0.6787	0.0235	0.0611	-0.0410
37	0.4145	-0.2553	-0.1669	-0.6042	0.0617	-0.0159	-0.0445
38	0.4420	-0.3625	0.0978	-0.4637	0.2146	0.0707	-0.0517
39	0.4284	-0.4202	-0.0581	-0.3407	0.1112	0.1078	-0.0788
40	0.2344	-0.1705	-0.1403	-0.4979	0.3617	0.3834	0.1707
41	0.0439	-0.4230	0.1775	-0.4852	-0.0158	0.1172	0.2477
42	0.2454	-0.1731	-0.0612	-0.6536	0.1059	0.0790	0.0861
43	-0.2109	-0.6319	0.2587	-0.3812	-0.0679	0.1034	0.0794
44	0.2543	-0.7511	0.0914	-0.1044	0.0485	0.1225	0.0206
45	0.0114	-0.8390	0.0027	-0.0775	0.1324	0.1670	-0.1422
46	-0.0155	-0.7586	0.1465	-0.1666	0.1007	0.1874	-0.2200
47	0.0664	-0.4209	-0.1933	-0.3213	0.3301	0.4095	-0.0684
48	0.1720	-0.6532	-0.1838	-0.2562	-0.0149	0.1499	-0.0976
49	0.5453	-0.5123	-0.2913	0.0022	-0.0070	-0.0356	-0.1772
50	0.4083	-0.5476	-0.1985	0.1625	0.2438	0.1030	-0.0579
51	0.0884	-0.4790	-0.0498	-0.2675	0.1549	0.0200	-0.2208
52	0.0483	-0.6407	0.0397	-0.0161	0.2450	-0.1340	0.1065
53	0.3821	-0.1130	0.1980	-0.1652	-0.0030	0.2116	-0.1297
54	0.3759	-0.4465	0.1786	-0.1392	0.3632	0.0762	-0.1480
55	0.3898	-0.2770	0.2810	-0.2468	-0.1342	0.3110	-0.3051

	1	2	3	4	5	6	7
56	0.3366	-0.2770	0.0412	-0.0456	0.1808	0.7809	-0.0774
57	0.3680	-0.1155	0.1650	-0.0067	0.0780	0.7481	0.0414
58	0.2780	-0.1547	0.1715	-0.2185	0.2579	0.6924	0.1255
59	0.0933	0.0418	0.7088	-0.0354	0.0292	0.0941	-0.1293
60	0.0685	-0.0896	0.6557	-0.1216	0.0284	0.1843	0.1324
61	-0.0422	-0.1106	0.7193	0.1926	0.2854	0.0057	-0.0781
62	-0.0076	0.0230	0.6454	0.0624	0.0041	-0.0917	-0.2844
63	0.1903	-0.1837	0.3162	0.0068	-0.1520	0.0114	-0.6233
64	-0.1348	-0.0345	0.0236	0.0031	0.1627	-0.0461	-0.6484

APPENDIX D

ANALYSES OF VARIANCE TEST RESULTS ON STATISTICALLY SIGNIFICANT ITEMS

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ANALYSES OF VARIANCE TEST RESULTS ON STATISTICALLY SIGNIFICANT ITEMS

I. INDEPENDENT VARIABLE IS EDUCATORS VS. VOCATIONAL REHABILITATION PERSONNEL

Table 1. Summary data and analysis of variance curriculum element #5.

CATEGORY	n	M	S.D.		
1. Educators	43	3.790	0.741		
2. Voc. Rehab.	33	3.030	0.983		
(OVERALL)	76	3.460	0.930		
Source	s.s.	df	m.s.	F	
Between Categories	10.795	1	10.795	14.770	p=<0.0005
Within Categories	54.085	74	0.730		
Total	64.881	75			

Table 2. Summary data and analysis of variance on curriculum element #16.

CATEGORY	n	M	S.D.		
1. Educators	43	3.860	0.709		
2. Voc. Rehab.	33	3.272	0.910		
(OVERALL)	76	3.605	0.849		
Source	s.s.	df	m.s.	F	
Between Categories	6.449	1	6.449	10.004	p=<0.002
Within Categories	47.708	74	0.644		
Total	54.157	75			

Table 3. Summary data and analysis of variance on curriculum element #19.

CATEGORY	n	M	S.D.		
1. Educators	43	4.325	0.7474		
2. Voc. Rehab.	33	3.545	1.148		
(OVERALL)	76	3.986	1.013		
Source	s.s.	df	m.s.	F	
Between Categories	11.363	1	11.363	12.813	p= 0.001
Within Categories	65.623	74	0.886		
Total	76.986	75			

Table 4. Summary data and analysis of variance on curriculum element #20.

CATEGORY	n	M	S.D.		
1. Educators	43	4.604	0.583		
2. Voc. Rehab.	33	3.545	0.968		
(OVERALL)	76	4.342	0.825		
Source	s.s.	df	m.s.	F	
Between Categories	6.826	1	6.826	11.408	p= 0.001
Within Categories	44.279	74	0.598		
Total	51.105	75			

Table 5. Summary data and analysis of variance on curriculum element #21.

CATEGORY	n	M	S.D.		
1. Educators	43	4.348	0.813		
2. Voc. Rehab.	33	3.575	1.225		
(OVERALL)	76	4.013	1.076		
Source	s.s.	df	m.s.	F	
Between Categories	11.158	1	11.158	10.889	p= 0.001
Within Categories	75.828	74	1.024		
Total	86.986	75			

Table 6. Summary data and analysis of variance on curriculum element #25.

CATEGORY	n	M	S.D.		
1. Educators	43	4.302	0.802		
2. Voc. Rehab.	33	3.696	0.918		
(OVERALL)	76	4.039	0.900		
Source	s.s.	df	m.s.	F	
Between Categories	6.842	1	6.842	9.369	p- 0.003
Within Categories	54.039	74	0.730		
Total	62.671	75			

Table 7. Summary data and analysis of variance on curriculum element #39.

CATEGORY	n	M	S.D.		
1. Educators	43	3.744	0.875		
2. Voc. Rehab.	33	3.121	0.780		
(OVERALL)	76	3.473	0.886		
Source	s.s.	df	m.s.	F	
Between Categories	7.246	1	7.246		p=0.002
Within Categories	51.701	74	0.698		
Total	58.947	75			

Table 8. Summary data and analysis of variance on curriculum element #49.

CATEGORY	n	M	S.D.		
1. Educators	43	4.000	0.690		
2. Voc. Rehab.	33	3.333	1.080		
(OVERALL)	76	3.710	0.935		
Source	s.s.	df	m.s.	F	
Between Categories	8.298	1	8.298	10.710	p= .002
Within Categories	57.333	74	0.774		
Total	65.631	75			

Table 9. Summary data and analysis of variance on curriculum element #50.

CATEGORY	n	M	S.D.		
1. Educators	43	4.093	0.781		
2. Voc. Rehab.	33	3.454	0.904		
(OVERALL)	76	3.815	0.890		
Source	s.s.	df	m.s.	F	
Between Categories	7.611	1	7.611	10.871	p= 0.002
Within Categories	51.809	74	0.700		
Total	59.421	75			

II. INDEPENDENT VARIABLE IS AGE

Table 1. Summary data and analysis of variance on the impact of age upon the value score on #18.

CATEGORY	n	M	S.D.		
1. 25-34	38	3.184	0.896		
2. 35-44	26	3.846	0.784		
3. 45 over	12	3.916	0.792		
(OVERALL)	76	3.526	0.901		
Source	s.s.	df	m.s.	F	
Between Categories	8.935	2	4.467	6.279	p= 0.003
Within Categories	52.011	73	0.712		
Total	60.947	75			

Table 2. Summary data and analysis of variance on the impact of age upon the value score on #24.

CATEGORY	n	M	S.D.		
1. 25-34	38	2.736	0.890		
2. 35-44	26	3.500	9.860		
3. 45 over	12	3.166	0.717		
(OVERALL)	76	3.065	9.914		
Source	s.s.	df	m.s.	F	
Between Categories	9.135	2	4.567	6.228	p=0.003
Within Categories	53.535	73	0.733		
Total	62.671	75			

Table 3. Summary data and analysis of variance on the impact of age upon the value score on #27.

CATEGORY	n	M	S.D.		
1. 25-34	38	1.973	0.787		
2. 35-44	26	2.769	1.031		
3. 45 over	12	2.416	0.900		
(OVERALL)	76	2.315	0.955		
Source	s.s.	df	m.s.	F	
Between Categories	9.915	2	4.957	6.185	p=0.003
Within Categories	58.505	73	0.801		
Total	58.421	75			

Table 4. Summary data and analysis of variance on the impact of age upon the value score on #30.

CATEGORY	n	M	S.D.		
1. 25-34	38	3.289	1.010		
2. 35-44	26	4.346	0.935		
3. 45 over	12	3.916	0.762		
(OVERALL)	76	3.750	1.059		
Source	s.s.	df	m.s.	F	
Between Categories	17.632	2	8.816	9.-61	p= 0.0005
Within Categories	66.617	73	0.912		
Total	84.250	75			

Table 5. Summary data and analysis of variance on the impact of age upon the value score on #32.

CATEGORY	n	M	S.D.		
1. 25-34	38	2.184	0.865		
2. 35-44	26	2.961	0.773		
3. 45 over	12	2.583	0.900		
(OVERALL)	76		0.901		
Source	s.s.	df	m.s.	F	
Between Categories	9.398	2	4.699	6.649	p=0.002
Within Categories	51.588	73			
Total	60.986	75			

Table 6. Summary data and analysis of variance on the impact of age upon the value score on #35.

CATEGORY	n	M	S.D.		
1. 25-34	38	3.368	0.913		
2. 35-44	26	4.230	0.792		
3. 45 over	12	4.083	0.792		
(OVERALL)	76	3.776	0.960		
Source	s.s.	df	m.s.	F	
Between Categories	12.823	2	6.411	8.302	p=0.001
Within Categories	56.374	73	0.772		
Total	69.197	75			

Table 7. Summary data and analysis of variance on the impact of age upon the value score on #39.

CATEGORY	n	M	S.D.		
1. 25-34	38	3.131	0.704		
2. 35-44	26	4.000	0.848		
3. 45 over	12	3.416	0.996		
(OVERALL)	76	3.473	0.886		
Source	s.s.	df	m.s.	F	
Between Categories	11.688	2	5.844	9.0276	p= 0.0005
Within Categories	47.258	73	0.647		
Total	58.947	75			

Table 8. Summary data and analysis of variance on the impact of age upon the value score on #44.

CATEGORY	n	M	S.D.
1. 25-34	38	3.236	0.883
2. 35-44	26	4.000	0.748
3. 45 over	12	3.666	0.778
(OVERALL)	76	3.565	0.884

Source	s.s.	df	m.s.	F	
Between Categories	9.135	2	4.567	6.731	p= 0.002
Within Categories	49.535	73	0.678		
Total	58.671	75			

Table 9. Summary data and analysis of variance on the impact of age upon the value score on #49.

CATEGORY	n	M	S.D.
1. 25-34	38	3.342	1.046
2. 35-44	26	4.076	0.688
3. 45 over	12	4.083	0.514
(OVERALL)	76	3.710	0.935

Source	s.s.	df	m.s.	F	
Between Categories	10.316	2	5.158	6.907	p= 0.002
Within Categories	55.315	73	0.757		
Total	65.631	75			

III. INDEPENDENT VARIABLE IS EDUCATIONAL LEVEL

Table 1. Summary data and analysis of variance by educational level on element #5.

CATEGORY	n	M	S.D.
1. BA	33	3.030	0.983
2. MA	29	3.724	0.751
3. MA + 30	14	3.928	0.730
(OVERALL)	76	3.460	0.930

Source	s.s.	df	m.s.	F	
Between Categories	11.190	2	5.595	7.607	p= 0.001
Within Categories	53.691	73	0.735		
Total	64.881	75			

Table 2. Summary data and analysis of variance by educational level on element #19.

CATEGORY	n	M	S.D.
1. BA	33	3.545	1.148
2. MA	29	4.275	0.840
3. MA + 30	14	4.428	0.513
(OVERALL)	76	3.986	0.013

Source	s.s.	df	m.s.	F	
Between Categories	11.583	2	5.791	6.464	p= 0.003
Within Categories	65.403	73	0.895		
Total	76.986	75			

Table 3. Summary data and analysis of variance by educational level on element #20.

CATEGORY	n	M	S.D.
1. BA	33	4.000	0.968
2. MA	29	4.482	0.633
3. MA + 30	14	4.851	0.363
(OVERALL)	76	4.342	0.825

Source	s.s.	df	m.s.	F
Between Categories	8.149	2	4.074	6.924
Within Categories	42.955	73	0.588	
Total	51.105	75		

IV. THE INDEPENDENT VARIABLE IS SPECIAL EDUCATION CATEGORIES SERVED

Table 1. Summary data and analysis of variance on curriculum element #20.

CATEGORY	n	M	S.D.
1. 1-2	25	4.8000	0.577
2. 3-4	20	4.200	0.615
3. 5 or more	31	4.064	0.963
(OVERALL)	76	4.342	0.825

Source	s.s.	df	m.s.	F	
Between Categories	8.034	2	4.017	6.808	p= 0.002
Within Categories	43.070	73	0.590		
Total	51.105	75			

Table 2. Summary data and analysis of variance on curriculum element #25.

CATEGORY	n	M	S.D.		
1. 1-2	25	4.560	0.583		
2. 3-4	20	3.650	0.875		
3. 5 or more	31	3.870	0.957		
(OVERALL)	76	4.0394	0.900		
Source	s.s.	df	m.s.	F	
Between Categories	10.687	2	5.343	7.771	p= 0.001
Within Categories	50.193	73	0.687		
Total	60.881	75			

Table 3. Summary data and analysis of variance on curriculum element #33.

CATEGORY	n	M	S.D.		
1. 1-2	25	3.960	0.978		
2. 3-4	20	3.950	0.887		
3. 5 or more	31	3.096	1.044		
(OVERALL)	76	3.605	1.059		
Source	s.s.	df	m.a.	F	
Between Categories	13.538	2	6.769	6.997	p= 0.002
Within Categories	70.619	73	0.967		
Total	84.157	75			

Table 4. Summary data and analysis variance on curriculum element #49.

CATEGORY	n	M	S.D.
1. 1-2	25	4.200	0.577
2. 3-4	20	3.600	0.994
3. 5 or more	31	3.387	0.989
(OVERALL)	76	3.710	0.935

Source	s.s.	df	m.s.	F	
Between Categories	9.476	2	4.738	6.159	p= 0.003
Within Categories	56.154	73	0.769		
Total	65.631	75			

Table 5. Summary data and analysis variance on curriculum element #50.

CATEGORY	n	M	S.D.
1. 1-2	25	4.320	0.627
2. 3-4	20	3.700	0.978
3. 5 or more	31	3.483	0.851
(OVERALL)	76	3.815	0.890

Source	s.s.	df	m.s.	F	
Between Categories	10.039	2	3.019	7.420	p= 0.001
Within Categories	49.381	73	0.676		
Total	59.421	75			