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A STUDY OF THE RELATIVE IMPORTANCE OF TRAINING ON THE
EMPLOYABILITY OF THE MENTALLY RETARDED AS RATED BY
EMPLOYERS AND EDUCATORS IN CACHE COUNTY, UTAH

by

John F. Hurst

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Special Education

Approved:

UTAH STATE UNIVERSITY
Logan, Utah
1972

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John Fred Hurst

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ABSTRACT

A Study of the Relative Importance of Training on
the Employability of the Mentally Retarded as
Rated by Employers and Educators in
Cache County, Utah

by

John F. Hurst, Master of Science

Utah State University, 1972

Major Professor: Dr. Devoe C. Rickert
Department: Special Education

Relative differences in attitudes between educators and employers concerning training of the mentally retarded within Cache County were studied by analyzing their responses to 40 questions dealing with Academic, Personal, Social, and Vocational Skills.

Academic Skills were found to show no statistical significance in terms of attitude differences expressed by educators and employers as they relate to successful employability criterion.

Personal Skills were found to show no statistical significance in terms of attitude differences expressed by educators and employers tested as they relate to successful employability criterion.

Social Skills were found to show statistical significance at the .10 level in terms of attitude differences

expressed by educators and employers as they relate to successful employability criterion. Within this area, a higher mean score was recorded by employers than educators (44.83 to 42.90). This refers to the fact that employers, more than educators, feel that Social Skills are more important.

Vocational Skills were found to show the highest statistical significance of the categories tested in terms of attitude differences expressed by educators and employers as they relate to successful employability criterion. The statistical level on this category was at the .01 level. A higher mean score was found within the employer segment of this category, 46.03, than that for educators, 42.50.

(53 pages)

INTRODUCTION

Importance of the Study

Within the past decade, increased interest in the area of special education for the mentally retarded has resulted in expanded training facilities. Public approval has brought increases in financial appropriations for special education at the state and local levels. This has resulted in the implementation of programs for the mentally retarded that until recently have been non-existent or ignored.

One front attacking the problems of the mentally handicapped in the state of Utah is the Utah State Board of Education, Division of Vocational Rehabilitation Services. This agency was established in 1970 by the Federal Government to provide vocational rehabilitation services to all eligible disabled persons to include those mentally retarded in need of training and educational services. Paralleling the expansion of services to the mentally handicapped over the last decade, the Division of Vocational Rehabilitation in Cache County, Utah, in cooperation with local school districts and the Utah State Division of Special Education, is attempting to provide and extend rehabilitation services to mentally retarded students with the ultimate goal being gainful

employment for the trained mental retardate. (For a more comprehensive understanding of this cooperative agreement, see "Cooperative Agreement between the Office of Rehabilitation Services (ORS), the Cache School District and the State Division of Special Education (SDSE) July 1969," available upon request from the State Office of Rehabilitation Services, University Club Building, Salt Lake City, Utah.) The objectives of this cooperative agreement, established in 1969, are four-fold:

1. To improve and coordinate the programs of the above agencies in a manner that will develop more comprehensive and effective rehabilitation services for handicapped students in special education programs.
2. To provide more comprehensive services to students of the senior high school in the combined work and school (special education) program.
3. To establish and maintain a continuous, effective and dynamic working relationship between organizations.
4. To develop more adequate use of the organization's personnel and more effective rehabilitation of the handicapped students in special education.

Although the four above objectives are being met with a considerable amount of success, the end product of the program, defined as initial job placement and job retention of the retardate, is not being achieved to the extent desired.

From consulting records found at the Utah State Board of Education, Division of Vocational Rehabilitation, Logan, Utah, it was found that in 1969, of the 12 mental retardates

successfully completing special education programs in Cache County, nine were placed. Of that number, only three stayed on the job for more than three months. In 1970, of the 15 mental retardates completing special education programs in the county, 12 were placed with only four staying on the job for more than three months. In 1971, 16 mental retardates successfully completed special education programs within Cache County. Fourteen were initially placed with only six staying on the job three months or longer.

To give a better understanding of the particular problems faced within the special education programs, in terms of placing program graduates in jobs within Cache County, it would be of value to review the cultural and geographic aspects found in this type of a setting.

Cache County, Utah, is located in the extreme north-eastern part of the state with a population of 42,000. The major portion of the county is composed of Cache Valley which stretches into Idaho to the north, Rich County, Utah, to the east, and Box Elder County, Utah, to the south and west. Cache County consists of approximately 1,181 square miles with a population density of 38.1 persons per square mile. Historically, agriculture has been the basic source of economy for Cache County, and it remains today as the main source of income. The job situation for individuals with limited skills falls under a general labor category. The majority of mental retardates

served by the Division of Rehabilitation falls into this category. Due to limited industrialization in the county, the number of job possibilities within this labor category are severely limited, making it very difficult to place the mental retardate.

Although the lack of employment opportunities within Cache County is certainly a variable to be considered, it is felt by the researcher that other factors can help account for the difficulty in securing jobs for the mentally retarded. The area of concern in this paper is examination of a set of these hypothesized factors.

Theoretical Criterion for Study

According to the Vocational Education for Handicapped Persons: Handbook for Program Implementation, used as a general curriculum guide for vocational education programs in the United States, the most crucial set of factors in establishing an educational curriculum for the mentally retarded are categorized into four major areas:

1. Basic academic skills related to communication, computation and quantification,
2. Social skills related to work performance,
3. Personal-Social skills, and
4. Vocational skills related to work performance. (Young, et. al., 1969, pp. 60-61)

Using these four general areas, it would be valuable to measure the importance of each as viewed by educators and employers of the mentally handicapped in Cache County, Utah, as they relate to employment of mental retardates.

Prior to an examination of these four areas, however, it would be extremely useful to examine literature that has been written concerning successful employability criterion for the mentally retarded.

REVIEW OF LITERATURE

History of Vocational Training and Placement

The field of vocational training and placement for the mentally retarded is a comparatively new one in the public schools. The area of special education has had policy and theory change modify it as a result of various programs that have been attempted. The area of least development in the field has been the area of job training and job placement.

There have been many studies over the past decade which have attempted to isolate factors which are associated with vocational success and failure. A review of the results of these studies may reveal information which will be helpful in developing needed skills in the special education programs as it relates to Cache County.

Intelligence and Vocational Performance

The relationship between vocational performance and intelligence has been the concern of several researchers; however, the results of these studies appear somewhat inconsistent. A significantly higher rate of work placement success for institutionalized mental retardates classified as high grade or borderline was found than for those retardates classified as middle grade by Madison (1964).

IQ and productivity of Trainable Mentally Retarded in a sheltered workshop setting were found to be positively correlated with each other by Tobias and Gorelick (1963). Taylor (1964), however, found that only a slight relationship existed between intellectual ability and rated work performance in a sheltered workshop. Delp (1957), using a case study approach, concluded that success on the job was attainable at mental levels below those previously thought to be minimal.

Kolstoe and Schafer (1961) concluded that intellectual ability may be more crucial in some jobs than in others. Some support for this was given by a study done by Tobias (1960) conducted with trainees in a sheltered workshop. He found that in comparing Wechsler Adult Intelligence Scale scores with scores on seven worksample tasks, the Performance IQ scores were significantly correlated with the four most difficult tasks. There was no correlation between Performance IQ and the three most simple tasks, and neither the Full Scale scores nor the Verbal IQ scores correlated with any of the seven worksample tasks. Appell, Williams, and Fishell (1962) found that Performance IQ scores on the W.A.I.S. were significantly higher for workshop trainees that had been placed satisfactorily than for trainees judged to be candidates for long-term experiences in the workshop and doubtful placement prospects for competitive situations.

Ladas (1961) has shown that the rate at which a trainee in a sheltered workshop learns worksample tasks is

related to rated productivity after completion of the training phase. This held true only for the persons falling above the median in learning rate. None of the persons above the median in learning rate were below the median in rated production.

Song and Song (1969) in a pilot study to identify selected variables which best predict job efficiency of institutionalized mental retardates in community employment, found that intellectual and work habit variables were the most important predictors of later efficiency in the community job when their relations to other variables were taken into account.

Ability to think abstractly may be a factor for use in predicting vocational success. Barrett, Relos, and Eisele (1965) found that discrimination between groups of vocationally successful and unsuccessful retardates could be determined on the basis of their ability to render abstract judgments in regard to a 20-item scale which required responses about attitudes held toward work and money.

Personality Factors Associated With Vocational Success and Failure

A number of studies have investigated different personality factors associated with vocational success and failure. Huber and Soforenko (1963) found that social adjustment counseling resulted in significant gains in scores on a modified version of the Bell Adjustment Inventory and that these increases were associated with an increase

in the rate of successful job placements outside of the institution for those patients receiving the counseling. Attitudes toward work and placement have been related to vocational outcome. Cohen (1960) found that unsuccessful placements had poor attitudes toward work and often quit unexpectedly. He also found that difficulty in relating with supervisors was a key factor in unsuccessful cases. Kolstoe (1961) found this same result when he compared employed and unemployed mentally retarded males. The employed group was higher on ratings of cheerfulness, respect for supervisors, and cooperation. Cooperation, ambition, and obedience were factors associated with vocational success in a study by Shafter (1957). Warren (1961) also found these to be important factors. Motivation is listed as an important factor in workshop performance on simple tasks in a study by Tobias (1960).

Kolstoe and Shafter (1961) have raised the question about the interrelationships of personality factors required for vocational success. They contend that different jobs require different personality traits and that generalized statements about desired personality variables are not appropriate. They recommend that the requirements of each job be explored individually before judging the suitability of an individual for the job.

Behavior and Conduct Related to
Vocational Success and Failure

Behavior and conduct have been mentioned frequently as important variables related to vocational success and failure. Both Cohen (1960) and Shafter (1957) found that deviancy was often associated with failure on the job placement. Acts such as theft, altering checks, sexual problems, fighting, and quarreling were listed as frequent problem areas. In a later study by Madison (1964), behavior problems were found correlated with differences between successful and unsuccessful placements from an institution.

Song and Song (1969) showed that withdrawn and aggressive behavior added little to the improvement of prediction in terms of job efficiency of institutionalized mental retardates in community employment. It is difficult to interpret these findings, since many factors could account for this difference in results.

Education and Training Factors
Associated with Vocational Success and Failure

The importance of education and training has been the subject of several studies. Taylor (1964) found that a factor of Verbal-Numerical-Education ability was related to rated work performance in a sheltered workshop. Kolstoe (1961) found that those clients in an Employment Evaluation project who had spent more time in special classes had a significantly greater chance for employment after conclusion

of their experiences in the project. Cowen and Goldman (1959) found that vocational success was related to vocational training but not to formal education. Madison (1964) also found that the amount of formal education to be unrelated to work placement success. In this area, as in that of behavior and conduct, interpretation of the findings is difficult.

Previous Work Experience Related to Vocational Success and Failure

Schafter (1957) found that a significantly greater number of successful placements were regarded as good workers in the institution in comparison to the unsuccessful group, although previous work experience was not found to be correlated with vocational success of clients of a state vocational rehabilitation agency.

Madison (1964) found that patients who had previously made a minimum adjustment outside of an institution prior to admission had a significantly higher probability of success for temporary discharge and vocational placement from the institution. In the same study, he found that staff agreement about the desirability of temporary discharge was correlated with placement success.

Physical Factors Related to Vocational Outcome

Various physical factors have often been mentioned as related to vocational outcome. Two studies support the notion that health is an important variable. Cohen (1960)

found that some patients returning to the institution from work placements did so from illness. Kolstoe (1961) found that the incidence of fair or poor health was significantly higher in a group of unemployed former clients of an employment evaluation project than in a group of successfully employed former clients. In the above study by Cohen, strength was not found to be a factor associated with return to the institution. Dexterity and coordination appear to be important factors. Kolstoe (1961) found that lack of coordination was more prevalent in an unemployed group than in an employed group. Of the eight interpretable factors isolated by Taylor (1964) in his study of factors related to rated work performance, three appeared to be a result of dexterity and motor coordination. He concluded that dexterity was the only factor in his study that seemed to be related to actual on-the-job ability.

Skill Factors Related to Vocational Success

In terms of skill, Cohen (1960) found that very few of the persons returned to the institution from unsuccessful placements who were unable to meet the skill requirements of the job. In his comparative study of employed and unemployed persons, Kolstoe (1961) found that the employed group had been notably superior in performance on tasks involving assembly, sorting, wrapping packages, and use of basic hand tools. The present research findings are difficult to interpret without further investigation.

Family Factors Related to Vocational Success

There is some indication that family factors may be important to vocational success. Cohen (1960) found that severe problems at home were cited as the major cause for return to the institution in 10 of the 73 unsuccessful placements studied. The problems included lack of family support and poor interpersonal relationships with parents and/or siblings. Kolstoe and Schafter (1961) said vocational success appears to be greater among mentally retarded adults who have had a greater degree of freedom to make decisions concerning their activities.

Summary

After a careful review of applicable literature, it was found that few recent studies were available showing variables that can be used as predictors of vocational success for the mentally retarded. Because of this lack of recent research, the study with which this paper is concerned is thought to take on added significance.

From the review of studies that have been conducted in this area, however, several general observations could be made concerning the characteristics of the mentally retarded as they relate to successful employment.

First, that studies have shown at least a minor correlation between successful employment and intelligence.

Second, that personality factors are important in terms of one's gaining and holding employment.

Third, that appropriate behavior and conduct on the part of those mentally retarded seeking employment are significant.

Fourth, that education, training, and previous work experience play an important role in the successful employment of the mentally retarded.

Fifth, that physical factors are important in an individual's successful quest for, and retention of, employment.

Sixth, that the necessary skill level to successfully meet the criterion for employment is related to employability.

Seventh, that there is some evidence that would indicate that home environment is an important variable to consider in successful employment of the mentally handicapped.

It is felt by the writer that these seven areas can be broadly defined within the areas of academic, personal, social, and vocational skills. It is also felt that employers and educators of the mentally handicapped within the Cache County, Utah, area have significant attitude differences towards each of these four broad areas in terms of their importance to successful employment. This view has been formulated after having worked with these educators and employers over a four-year period in the role of a vocational rehabilitation counselor.

General Hypotheses

After examining previous research on the employability factors considered to be important in the successful employment of the mentally retarded, employers and educators of the mentally retarded in Cache County, Utah, were examined from an attitude perspective to gain information that would allow the writer to compare their feelings on four areas of employability criterion. Each employer and educator was examined closely in terms of their specific attitudes in these areas, in order to assess any differences between them. It is the purpose of this section of the study to hypothesize significant and important differences in these attitudes. The general hypotheses are as follows:

First, that there will be a significant difference between attitudes of employers and educators of the mentally retarded in Cache County, Utah, in the area of Academic skills.

Second, that there will be a significant difference between attitudes of employers and educators of the mentally retarded in Cache County, Utah, in the area of Personal skills.

Third, that there will be a significant difference between attitudes of employers and educators of the mentally retarded in Cache County, Utah, in the area of Social skills.

Fourth, that there will be a significant difference

between attitudes of employers and educators of the mentally retarded in Cache County, Utah, in the area of Vocational skills.

METHOD OF PROCEDURE

Procedure

The instrument for this study consisted of a six-page questionnaire. Forty questions, ten for each area, were utilized to cover academic, personal, social and vocational skills and their relationship to gainful employment of mental retardates, as viewed by those individuals questioned. The interviewees consisted of educators within Cache County who have at least a Bachelor's Degree and not less than two years of experience teaching the mentally retarded. The criterion used for employers studied was that they presently employ or have previously employed one or more mentally retarded persons. The length of time that the employers had the mentally retarded working for them was not specified. All employers were located in Cache County.

The sample included all known employers and educators of the mentally retarded in Cache County. These were found through consulting the Office of Vocational Rehabilitation Services records, and school listings. The group was divided into those individuals who employ and those individuals who educate the mentally retarded

The items for the questionnaire were formulated after a review of the literature and were submitted to the thesis

committee for their comments and suggestions. The resulting items were submitted to seven graduate students in the Department of Special Education at Utah State University. These students have had at least two years experience working with the mentally retarded. The graduates were asked to check the questions for clarity, content, and communication. These steps were taken to establish the content validity of the questionnaire. The questionnaire was delivered personally by the investigator and filled out by each educator and employer.

The questionnaire contained questions concerning:

1) Basic academic skills related to communication, computation, and quantification, 2) Social skills related to work performance, 3) Personal-Social skills, and 4) Skills related to general work orientation. The questions were rated by each respondent as to their degree of importance in relation to gainful employment of mental retardates. Respondents were asked to rate each item using the following scale, similar to a Likert Scale. (1) Strong Emphasis (2) Moderate Emphasis (3) Minimal Emphasis (4) No Emphasis (5) Not applicable. The numerals preceding each of the descriptions listed above were used as responses on the schedules.

Analysis of Data

Four scales were devised to obtain employers and educator's attitudes toward specific academic, personal,

social, and vocational skills which are taught in special education programs and which are thought to be crucial for initial employment and retention of that employment by the mentally retarded. (Retention, for purposes of the study, is defined as employment for a period of three months or longer.) These scales were assigned values. These values were used for mathematical analysis of the answers, and for determining means of a specific question. A code was devised in which the numerals 5, 4, and 3 corresponded with "Strong Emphasis," "Moderate Emphasis," and "Minimal Emphasis." The number 2 indicated "No Emphasis" and 1 indicated "Not Applicable."

After the schedules were assigned values, the four scales were constructed by first finding a group average for each question used in a particular scale and then adding these averages together to find a group mean for that scale. For example, the first scale, used to determine attitudes toward the importance of academic skills, included ten questions under I. Academic Skills. (See schedule in Appendix). A group average was found for each question. These ten averages were then added and a final mean found. The same procedure was followed for the other three scales. The second scale, which measures attitudes towards the importance of personal skills, included ten questions under II. Personal Skills. The third scale, which determined attitudes towards social skills, included ten questions under III. Social Skills. The fourth scale, which measured

attitudes toward vocational skills, included ten questions under IV. Vocational Skills.

After the group means were found for each scale, the student's t-test, a two tailed t-test for unequal means, was employed between total mean scores of employers and educators within each of the four categories in order to determine statistical significance. (Runyon and Haber, 1967, p. 162).

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (u_1 - u_2)}{\sqrt{\left(\frac{\sum x_1^2}{n_1} + \frac{\sum x_2^2}{n_2} - 2\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

For this study, the group mean scores employed in the t-test are derived from the summation of the individual responses, within each category, and not from the responses to individual questions. It is the purpose of the individual question mean scores to allow the reader to compare relative differences between questions.

STATISTICAL ANALYSIS OF CATEGORIES

Attitudes of educators and employers toward academic skills, personal skills, social skills, and vocational skills were analyzed to determine statistical significance. The results of the analysis of the categories are as follows.

Academic Skills

Within this category the responses of 10 educators and 30 employers were analyzed. Each respondent answered all questions in the questionnaire. The mean group score for educators was 40.50, compared to 40.43 for the employer category. (See Table 1). Within the educator segment of the sample, the mean scores ranged from 3.1 for question number 9 to 5.0 for question number three. Questions 1, 2, 4, 5, 6, 7, 8, and 10 had mean scores of 4.5, 4.7, 3.9, 3.7, 4.0, 3.6, 3.9, and 4.1 respectively. The employer segment of the category had mean scores ranging from 3.2 on question 9 to 4.9 on question number 3. The other mean scores for this category were 4.3 for question 1; 4.3 for question number 2; 3.8 for question number 4; 3.7 for question number 5; 4.3 for question number 6; 3.7 for question number 7; 3.9 for question number 8; and 4.3 for question number 10. (For a closer examination of relative differences between questions, see Table 1.) (For examination of

Table 1. Attitudes of employers and educators towards academic skills

Group	Sample size	Question No.	Mean score	Group mean score	Standard deviation	t test value
Educators	10	1-	4.50	40.50	1.38	
		2-	4.70			
		3-	5.00			
		4-	3.90			
		5-	3.70			
		6-	4.00			
		7-	3.60			
		8-	3.90			
		9-	3.10			
		10-	4.50			
						.049
Employers	30	1-	4.36	40.43	3.70	
		2-	4.33			
		3-	4.87			
		4-	3.83			
		5-	3.70			
		6-	4.30			
		7-	3.70			
		8-	3.87			
		9-	3.27			
		10-	4.30			

individual question content, see Appendix I.)

A t-test run between educators' and employers' responses showed no statistical significance. This refers to the fact that this particular mean difference could have happened by chance factors alone, which makes it unreliable in terms of interpreting from the statistical level. Because of this lack in statistical significance, the hypothesis that an attitude difference exists between educators and employers in the area of academic skills was rejected.

Personal Skills

This category had within it 10 educators and 30 employers. As in the area of academic skills, those individuals tested responded to all of the questions asked of them. The mean group score for educators in this category was 40.90 as against 41.73 for the employer category (Table 2). Within the educator segment of the sample, the mean scores ranged from a low of 3.4 for question number 10 to a high of 5.0 for question number 1. Questions 2, 3, 4, 5, 6, 7, 8, and 9 had mean scores of 4.5, 3.9, 3.5, 4.6, 3.5, 4.0, 3.8, and 4.7 respectively. The employer portion of the category had a mean score of 3.5 on question number 1 for the highest scored question. Mean scores for questions 2, 3, 4, 5, 8, 9, and 10 were 4.6, 4.3, 3.8, 4.7, 3.9, 4.2, and 4.1 respectively. (For a closer examination of individual question content, see Appendix I.) (For a closer examination of relative differences between questions, see Table 2.)

Table 2. Attitudes of employers and educators towards personal skills

Group	Sample size	Question No.	Mean score	Group mean score	Standard deviation	t test value
Educators	10	1-	5.00	40.90	1.83	
		2-	4.50			
		3-	3.90			
		4-	3.50			
		5-	4.60			
		6-	3.50			
		7-	4.00			
		8-	3.80			
		9-	4.70			
		10-	3.40			
						.615
Employers	30	1-	4.90	41.73	3.70	
		2-	4.63			
		3-	4.30			
		4-	3.83			
		5-	4.77			
		6-	3.50			
		7-	3.50			
		8-	3.90			
		9-	4.27			
		10-	4.10			

A t-test between these two segments of the category revealed no statistical significance. This mean score difference could have happened by chance factors alone; therefore, it is not validated on a statistical level. Because of this lack in statistical significance, the hypothesis that a difference in attitudes exists between educators and employers in the area of personal skills was rejected.

Social Skills

Ten educators and 30 employers were also tested in this category. As in the previous two categories, 100 percent of the questions asked were responded to by both educators and employers. The mean group score in this category for employers was 44.83. For the educators in this category, the mean group score was 42.90 (Table 3). Within this category, the mean scores for educators ranged from a low mean score of 3.1 on question number 9 to a high of 4.9 on question number 3. Questions numbered 1, 2, 4, 5, 6, 7, 8, and 10 had mean scores of 4.5, 4.0, 4.4, 3.7, 4.6, 4.8, 4.8, and 4.1 respectively. For the employers, the mean scores ranged from a low of 3.3 on question number 9 to a high of 4.9 on questions 1, 3, and 8. Questions 2, 4, 5, 6, 7, and 10 had mean scores of 4.5, 4.6, 4.0, 4.4, 4.8, and 4.3 respectively. (For a closer examination of relative differences between questions, see Table 3.) (For examination of individual question content, see Appendix I.)

Table 3. Attitudes of employers and educators towards social skills

Group	Sample size	Question No.	Mean score	Group mean score	Standard deviation	t test value
Educators	10	1-	4.50	42.90	1.96	1.725
		2-	4.00			
		3-	4.90			
		4-	4.40			
		5-	3.70			
		6-	4.60			
		7-	4.80			
		8-	4.80			
		9-	3.10			
		10-	4.10			
Employers	30	1-	4.90	44.83	2.80	
		2-	4.47			
		3-	4.90			
		4-	4.57			
		5-	4.00			
		6-	4.43			
		7-	4.83			
		8-	4.93			
		9-	3.30			
		10-	4.33			

Significant at 10 percent level.

A t-test between educators and employers within this category revealed statistical significance at the .10 level, thereby upholding the hypothesis that significant attitude differences do exist in this area of the study.

Vocational Skills

Within this category 10 educators and 30 employers were also tested. All questions were answered on the questionnaires by all respondents. The mean group score for educators in this category was 42.50 compared to 46.03 for the employer category (Table 4). The educator portion of the sample had mean scores ranging from a low of 3.4 on question number 7 to a high of 4.9 on question number 3. Questions 1, 2, 4, 5, 6, 8, 9, and 10 had mean scores of 3.8, 4.1, 4.8, 4.3, 4.6, 3.9, 4.3, and 4.8 respectively. The employer segment of the category had mean scores ranging from a low of 3.8 on question number 7 to a high of 4.9 on question numbers 3, 9, and 10. Questions 1, 2, 4, 5, 6, and 8 had mean scores of 4.5, 4.6, 4.8, 4.5, 4.8, and 4.4 respectively. (For a closer examination of relative differences between questions, see Table 4.) For examination of individual question content, see Appendix I.)

A t-test run between educators' and employers' responses in this category showed statistical significance at the .01 level. This category, then, is the most significant category of all those tested. Because of this

Table 4. Attitudes of employers and educators towards vocational skills

Group	Sample size	Question No.	Mean score	Group mean score	Standard deviation	t test value
Educators	10	1-	3.80	42.50	1.62	3.335*
		2-	4.10			
		3-	4.90			
		4-	4.80			
		5-	4.30			
		6-	4.60			
		7-	3.40			
		8-	3.90			
		9-	4.30			
		10-	4.80			
Employers	30	1-	4.50	46.03	2.69	3.335*
		2-	4.60			
		3-	4.87			
		4-	4.80			
		5-	4.47			
		6-	4.80			
		7-	3.80			
		8-	4.43			
		9-	4.87			
		10-	4.90			

* Significant at 1 percent level.

significance, the hypothesis that an attitude difference exists between educators and employers in the area of vocational skills was upheld.

DISCUSSION

Academic Skills

Academic skills as an area in which educators and employers have attitude differences in terms of special education programs was not statistically upheld. Although the group mean scores were different, they did not vary to the extent of statistical significance. A reason for this lack of difference is the fact that academic skills within a special education program are thought to be quite essential on the part of both educators and employers. This is evident from the mean scores of 40.50 for educators and 40.43 for employers elicited in this area. If a lack of academic skills on the part of special education students was apparent to either employers or educators, a significant difference would have existed within this area. It is inferred from this reasoning that academic skills are viewed as an area in which no great problem exists in terms of what the educators teach the students within academic skills, and what employers expect from these same students in this area upon hiring them.

Personal Skills

This hypothesized area concerning personal skills was not statistically upheld. The group mean scores for

employers and educators in this category were separated by only .1 or 10 percent. This was not statistically significant when applying a t-test. Reasons for this closeness in attitudes center around the fact that personal skills are not areas of concern in terms of what educators think to be important and what employers expect. From the high group mean scores (40.90 for educators and 41.73 for employers), it can be seen that personal skills are considered relatively important by both segments of this category. Once again, it is inferred that if this set of criterion were posing any great difficulties within the employer or educator realm, a significant difference in attitudes on the part of these two segments of the sample would have been revealed. No further explanation can be offered for the results from this category at this time.

Social Skills

Social skills as an area in which educators and employers have attitude differences in terms of special education programs was statistically upheld to the .10 level of significance. This finding is a very important aspect of this study. The reason for this statistical difference in attitudes stems from the fact that those areas considered under the social skills are felt to be more important by employers than educators, as can be seen by examination of the group mean scores within this category.

The employers' group mean was 44.83 as compared to the educator group mean of 42.90. A possibility exists that educators, because of the nature of their relationship with the special education students, have a lesser opportunity to view the social skills in practice than do the employers. This would lend itself to a distorted perspective in terms of the effective assimilation of those social skills offered. The employers, on the other hand, are in constant, daily contact with these students, thereby having an opportunity to view manifested social skills on a more natural level. This could possibly have the effect of causing some difference in attitude in this area between educators and employers of special education students.

Vocational Skills

The importance of the vocational category as related to this paper was the most significant of all the categories tested. The level of statistical significance was calculated at the .01 level. The reason for this high statistical significance stems from the fact that the vocational skills area is the one category tested that shows the most marked difference in terms of employers' and educators' attitudes towards the relative importance of the four general categories tested. The group mean scores on this category were 42.50 for the educators and 46.03 for the employers. The postulated

reasons for this difference are related to the reason advanced under social skills for the difference: that being because of the difference in terms of the relationship with special education students by employers as against educators.' The special education educators have a different type of association with these students than do the employers of these same individuals. Those vocational skills thought to be important by educators are not easily viewed by them from a practical base. The employers of special education students, however, are concerned with the ability of their employees to perform on an efficient basis. A possibility also exists that educators with their philosophical perspective centered in humanitarian principles are more concerned with the student himself, than the actual vocational abilities that he may possess. The employer, on the other hand, is more concerned with getting the job done, and the individual for the most part is secondary.

SUMMARY AND CONCLUSIONS

This was an exploratory study designed to identify attitude differences between educators and employers of the mentally handicapped in Cache County, Utah, in terms of four selected areas of hypothesized importance. These areas included Academic Skills, Social Skills, Personal Skills, and Vocational Skills. The major objective of the study was to determine differences in attitude between 10 educators who teach the mentally retarded in Cache County and 30 employers who hire such trained mentally retarded, in order to identify some possible reasons for the lack of successful job placements and retention of those placements by the mentally retarded within Cache County.

Thirty questionnaires were delivered to all employers of the mentally retarded in Cache County, and 10 questionnaires delivered to educators of these mentally retarded. All employers and educators to whom the questionnaires were delivered had previously agreed to cooperate with the researcher.

The statistical method used consisted of a t-test run between educators' group mean scores and employers' group mean scores on each category of hypothesized importance.

The data of the study indicated that the attitudes between educators and employers on academic skills did not differ. Although a group mean difference did exist, it was not validated as being statistically significant.

It was found that there were no significant attitude differences between educators and employers in the area of personal skills. A group mean difference existed in this category, but it was not statistically significant.

The attitudes of employers and educators tested were found to differ significantly in the area of social skills. The statistical level of significance was at the .10 level. Because of the significance level of attitude differences in this category, it would be most useful to identify the fact that these differences do exist to those educators and employers involved, in order to maximize efficiency in terms of special education goals.

Within the area of vocational skills, the attitudes of employers and educators differed to a greater degree than in any other category tested. A statistical level of significance was found to be at the .01 level. Because of the level of difference within this category, it is felt that to increase the employability of the mental retardates within Cache County, changes in the area of educator-employer awareness should be concentrated upon.

A major limitation of this study is its small sample size. In future studies, it would be most important to select a greater number of samples from a larger population.

This would help in determining the differences existing in attitudes, on a larger scale, between those individuals who teach the mentally retarded in special education programs, and those who hire these individuals once they have received training. It is felt by the researcher that more studies in this area would do much to point up the need for an increased amount of cooperation between these two important elements concerned with the mentally retarded as he strives for meaning and usefulness in life.

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APPENDIX

ATTITUDE SCHEDULE

Employers and educators who have had experience in either employing or training the mentally retarded in Cache County are being asked to help determine the relative importance of skills usually considered to be important in terms of the employability of Special Education students. For the purposes of this study, these skills are to be considered from a general vocational perspective rather than job specific.

Within this schedule are a series of vocational categories. Under each category are a number of specified skills. Read carefully the specified skills and then indicate the degree of importance you place on each as it relates to successful employment of the mentally retarded. In marking your feelings, please use the following guide:

1. STRONG EMPHASIS
2. MODERATE EMPHASIS
3. MINIMAL EMPHASIS
4. NO EMPHASIS
5. NOT APPLICABLE

Preceding each item in the schedule is a blank. Using the above guide, please fill in the blank with the number.

-
- | | |
|----------------------|-------------------|
| 1. STRONG EMPHASIS | 4. NO EMPHASIS |
| 2. MODERATE EMPHASIS | 5. NOT APPLICABLE |
| 3. MINIMAL EMPHASIS | |
-

I. ACADEMIC SKILLS

- _____ Learning to write.
- _____ Learning to read.
- _____ Learning how to follow directions.
- _____ Learning fundamental arithmetic processes.
- _____ Learning about our money system.
- _____ Learning work vocabulary.
- _____ Learning personal data required to complete
job application forms.
- _____ Learning how to handle money.
- _____ Learning to measure length and weight.
- _____ Learning how to tell time.

-
- | | |
|----------------------|-------------------|
| 1. STRONG EMPHASIS | 4. NO EMPHASIS |
| 2. MODERATE EMPHASIS | 5. NOT APPLICABLE |
| 3. MINIMAL EMPHASIS | |
-

II. PERSONAL SKILLS

- _____ Learning habits of cleanliness.
- _____ Learning acceptable manners and courtesy.
- _____ Learning how to maintain physical health.
- _____ Learning to maintain physical fitness and weight control.
- _____ Learning habits of good grooming.
- _____ Correction of speech problems.
- _____ Learning proper use of cosmetics.
- _____ Learning the skills of clothing cleanliness and repair.
- _____ Developing habits of good physical hygiene.
- _____ Learning to maintain acceptable hair styles.

-
- | | |
|----------------------|-------------------|
| 1. STRONG EMPHASIS | 4. NO EMPHASIS |
| 2. MODERATE EMPHASIS | 5. NOT APPLICABLE |
| 3. MINIMAL EMPHASIS | |
-

III. SOCIAL SKILLS

- _____ Learning to get along with peers and with those in authority.
- _____ Learning to work independently.
- _____ Punctuality and daily attendance.
- _____ Learning to adhere to acceptable standards of public behavior.
- _____ Learning to be cheerful.
- _____ Learning to accept criticism.
- _____ Learning how to accept advice without becoming aggressive, withdrawn, or discouraged.
- _____ Learning to follow directions.
- _____ Learning how to use work breaks constructively.
- _____ Learning to show initiative.

-
- | | |
|----------------------|-------------------|
| 1. STRONG EMPHASIS | 4. NO EMPHASIS |
| 2. MODERATE EMPHASIS | 5. NOT APPLICABLE |
| 3. MINIMAL EMPHASIS | |
-

IV. VOCATIONAL SKILLS

- _____ Learn to stick to a repetitive or demanding task.
- _____ Learning to be responsible for getting to and from the job.
- _____ Learning to be to work on time.
- _____ Being careful with tools and materials.
- _____ Learning proper dress for the job.
- _____ Learning basic job safety rules.
- _____ Developing dexterity and coordination involving both fine and gross motor movement.
- _____ Learning to complete work on time.
- _____ Learning to do quality work.
- _____ Learning to follow employer's rules and regulations.

VITA

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