

Different levels of Vocational competency among Students with Mild Intellectual Disabilities

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Abstract

The present study aims to determine the percentage of male and female students with mild intellectual disabilities exhibiting different levels of vocational competency. The result of the study was that majority (80%) of students with mild intellectual disabilities (ID) exhibiting moderate to high level of vocational competency. Only 20% of the students with mild intellectual disabilities (ID) exhibiting low level of vocational competency. While in all the skills of vocational competency, more percentage of male students with mild intellectual disabilities (ID) exhibited high level of vocational competency. Hence more training should be given to students who are at low level and help them to improve their vocational competency.

Keywords: Intellectual Disabilities (ID)

1. Introduction

Many research studies found out that students with mild ID are more like students with average and above average. Johnson and Blake (1960) (cited in Murugan, 2007) pointed that student with mild intellectual disabilities are able to learn, retain and transfer quite complex motor and verbal skill, according to their mental ages.

In terms of cognitive development, Fletcher, Scott, Blair and Bolger (2004) pointed out that there is a normally occurring variation with in children with mild ID. Many research studies also revealed that students with mild ID have vocational competency (Tiwari, 2011; Dixon and Reddacliffe, 1996; Black and Rojewski, 1998). From review of related studies, it can be noticed that there are studies conducted across the countries to assess the level of performance of students with mild ID on various skills. But, a very limited study is conducted at the state level especially in Karnataka. So the investigators were interested to conduct a study in the Karnataka.

2. Methodology of the Study

In this section, research design, population, selection of the sample, tool and technique of the study, description of the tools, procedure of the data collection and analysis of the data were discussed.

2.1 Research design: Exploratory and descriptive study

2.2 *Population of the study:* All the 70 special schools for ID in Karnataka state comprised population of the study. They are from the following districts- Bangalore, Mysore, Mandhya, Kodagu, Hassan, Udupi, Dakshina Kannada, Kolar, Ramanagara, Koppal, Davangeri, Gadag, Haveri, Dharwad, Raichur, Belgaum.

2.3 *Selection of sample:* From the population of 70 special schools, 42 from 6 districts were considered. The reason was, as the population being very large in number and vastly distributed. It was very difficult to conduct within the limited resources of the investigator. Hence only 42 special schools were considered. They are from Bangalore 27, Mysore 7, Kodagu 1, Hassan 1, Udupi 3, and Dakshina Kannada 3. Among these special schools, those met the criteria were only selected as sample. For this a preliminary survey was conducted with the following criteria,

- i. Special schools should be recognized by the Department for the Empowerment of Differently Abled and Senior Citizens, Government of Karnataka.
- ii. There should be students with mild ID studying in the special schools with valid IQ certificate from authorized institution.
- v. Necessary facilities should be available in the special schools.
- vi. Special schools offering vocational training were only considered.

With these criteria for selection of sample, investigator visited special schools and conducted preliminary survey. Through survey, it was found out that, 4 special schools- do not exist, 3 special schools - changed their location, 6- only for the students with severe and profound ID, 1- changed from ID to other disabilities, 7- not providing all the components of LCCE and 2- changed from LCCE to other programmes.

Hence these 23 special schools not met the criteria and so excluded from the study. While, remaining 19 special schools met all the criteria and were retained (details given in Table1).

Table 1: Retained and Excluded Special Schools

Districts	Number of Retained Special Schools	Number of Excluded Special Schools
Bangalore	9	18
Mysore	5	2
Kodagu	1	-
Hassan	-	1
Udupi	2	1
Dakshina Kannada	2	1
Total	19	23

Further in the study, different levels of vocational competency among students with mild ID were assessed. For this, special schools offering vocational training were only considered. Among this retained special schools, only 8 special schools were offering vocational training. The district-wise distribution of students with mild ID enrolled for vocational training is given in Table 2.

Table 2: Districts-wise Distribution of Students with Mild ID Enrolled for Vocational Training

Districts	Number of Students with Mild ID	
	Male	Female
Mysore	2	0
Kodagu	0	0
Dakshina Kannada	2	3
	7	6
Bangalore	8	6
	0	0
	10	5
	7	11
Total	36	31

Vocational competencies were assessed among the above mentioned number of students with mild ID.

2.4 Sampling Technique: Multi stagic purposive sampling

2.5 Tool and technique of the study

The following Table 3 includes variable, source of data, method of data collection and tool used,

Table 3: Tools and Technique of the Study

Variables	Informants/Sources of Data	Methods of Data Collection	Tools used
Vocational competencies among students with mild ID	Vocational trainers concerned with vocational training	Administering the tool orally with explanation where required	San Francisco Vocational Competency Scale developed by Levin and Elzey in 1979. A culture free test

2.6 San Francisco Vocational Competency Scale

2.6.1 Description of the Tool

The San Francisco Vocational Competency Scale was developed by Levin and Elzey in 1979. It is a culture free test. The purpose is to measure the vocational competency of individual with ID above 18 years of age. It is intended to measure actual performance and not presumptive ability. Individuals were rated at the levels which they characteristically perform at present. It contains 30 items encompassing four dimensions of vocational competence- motor skills, cognition, responsibility and social emotional behaviour. Further the dimensions were divided into number of items (given in Table 4).

Table 4: Dimensions of San Francisco Vocational Competency Scale

Sl No.	Dimensions	No. of Items
1.	Motor Skills	4
2.	Cognition	10
3.	Responsibility	9
4.	Social Emotional Behaviour	7
Total		30

2.6.2 Procedure of Data Collection

The items of the scale were read out to the informants- vocational trainers. Each items having four or five statement from which rater chooses the one most accurately describing the

student’s behaviour. Number rated from 1 through 4 or 5, with option 1 representing the lowest level of vocational competency and option 4 or 5 representing the highest level of vocational competency. The items of the scale consist of both positive and negative items. When the informants determined the appropriate option for an item, the investigator recorded the same.

2.6.3 Analysis of data

The analysis was done qualitatively by calculating and computing the level of vocational competency among students with mild ID rated by the informants- vocational trainers on each items.

3. Result and Discussion of the Study

The male and female students with mild ID exhibiting different levels of vocational competency in motor, cognition, responsibilities and social emotional skills were discussed as follows,

(a) Motor Skills

Table 5: Different Levels of Vocational competencies in Motor Skills

Different Levels of Vocational competencies	Statements	% of Students with Mild ID	
		Male	Female
Time in Learning the Task	5 minutes or less	2.8%	6.5%
	6 to 10 minutes	8.3%	9.7%
	11 to 15 minutes	41.7%	38.7%
	More than 15 minutes	47.2%	43.8%
Time in Completing the Task	From one to two hours	2.8%	6.5%
	From 41 minutes to one hour	8.3%	9.7%
	From 21 to 40 minutes	41.7%	38.7%
	Approximately the 20 minutes period	47.2%	43.8%
Operating Equipment with Moving Parts	Nearly always	5.6%	12.9%
	Frequently	11.1%	16.1%
	Approximately half the time	33.3%	29%
	Occasionally	41.7%	35.5%
	Hardly ever	8.3%	6.5%
Operating Manually Powered Machines	Hardly ever	5.6%	12.9%
	Occasionally	11.1%	16.1%
	Approximately half the time	33.3%	29%
	Frequently	41.7%	35.5%
	Nearly always	8.3%	6.5%

The above table 5 shows that majority of the students with mild ID (50%) exhibited moderate level of vocational competency in Motor skills. In these skills, more percentage of male exhibited higher level of vocational competency compared to female students with mild ID. While, Vuijk and et al., (2010) found out that children with mild ID had significantly more borderline and definite motor problems than the normative sample.

(b) Cognition Skills

Table 6: Different Levels of Vocational competencies in Cognitive Skills

Different Levels of Vocational competencies	Statements	% of Students with Mild ID	
		Male	Female
Remembering Instructions	Nearly always	-	-
	Frequently	14.8%	15.6%
	Approximately half the time	13.1%	15.6%
	Occasionally	26.2%	25%
	Hardly ever	45.9%	43.8%
Following Verbal Instructions	When they are accompanied by demonstration	19.7%	21.9%
	Without a demonstration if only one specific task is involved	19.7%	25%
	Without a demonstration, when two specific tasks are involved within the same job	26.2%	21.9%
	Without a demonstration, when three or more tasks are involved within the same job	34.4%	31.3%
Reading Ability	Cannot read any signs or instructions	8.2%	9.4%
	Can read signs which contain one or two familiar words (stop or off)	24.6%	21.9%
	Can read signs which contain one or two words or brief instructions not seen before	32.8%	25%
	Can read relatively long instructions not seen before	34.4%	28.1%
Measuring	Cannot use measuring instruments of any kind	14.8%	18.8%
	Given a measuring stick or object of a specific length, he/she can measure materials to that length	49.2%	53.1%
	Can measure to the nearest foot using a calibrated yardstick	29.5%	25%
	Can measure to the nearest inch using a calibrated yardstick	6.6%	3.1%
	Knows only the task required to perform	24.6%	21.9%

Knowledge of Job	In addition to his (she) own task, knows either the preceding or succeeding task	31.1%	37.5%
	Knows both the immediately preceding and succeeding tasks	27.9%	21.9%
	Knows all the tasks required for the job	16.4%	12.5%
Performing Previously Learned Tasks	One job only	24.6%	21.9%
	Two jobs	31.1%	37.5%
	Three jobs	27.9%	21.9%
	Four or more jobs	16.4%	12.5%
Reorientation to Task	Must be completely reoriented to the previous task	24.6%	21.9%
	Must be given a number of specific details before being able to pursue the previous task	31.1%	37.5%
	Needs only one or two specific details before being able to pursue the previous task	27.9%	21.9%
	Can pursue the previous task with no further instruction	16.4%	12.5%
Transferring Skills	Hardly ever	9.8%	18.8%
	Occasionally	21.3%	25%
	Approximately half the time	24.6%	21.9%
	Frequently	27.9%	21.9%
	Nearly always	16.4%	12.5%
Work Improvement with Experience	Shows little improvement	24.6%	21.9%
	Improves slowly but gradually	31.1%	37.5%
	Improves at a fairly rapid rate	27.9%	21.9%
	Improves rapidly	16.4%	12.5%
Explaining Tasks	Is unable to	24.6%	21.9%
	Gives an incomplete explanation	31.1%	37.5%
	Gives a complete but general explanation	27.9%	21.9%
	Gives a complete explanation including specific details	16.4%	12.5%

The above table 6 shows that majority of the students with mild ID (45%) exhibited higher level of vocational competency in Cognitive skills. Whereas, majority of students with ID (70%) exhibited moderate level of vocational competency in measuring and transferring skills. In these skills, more percentage of male exhibited higher level of vocational competency compared to female students with mild ID. Contradictory to this, studies found out that adult with ID take longer time in learning new things (Dixon and Reddacliffe, 1996; Tiwari, 2011). While Fletcher et al. (2004) found out that children with higher IQ scores were not the same children that scored at high levels on the cognitive tasks. Further on Reading skills, Ratz and Lenhard (2013) found out that 29.3% of students with ID do not read at all, 6.8% read at a logographic stage and 31.9% at an orthographic level.

(c) Responsibility Skills

Table 7: Different Levels of Vocational competencies in Responsibility Skills

Different Levels of Vocational competencies	Statements	% of Students with Mild ID	
		Male	Female
Initiating Task	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	9.7%
	Frequently	11.1%	19.4%
	Nearly always	83.3%	71%
Requesting Materials	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	6.5%
	Frequently	27.8%	32.3%
	Nearly always	69.4%	61.3%
Specifying what is Unclear	Indicates that he/she does not understand the task only after attempting to perform it	2.8%	6.5%
	Indicates, before attempting the task, that he/she does not understand, but gives no further explanation	8.3%	9.7%
	Indicates in general terms what is unclear before attempting the task	41.7%	38.7%
	Indicates specifically what is unclear before attempting the task	47.2%	43.8%
Following Safety Instructions	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	5.5%	9.7%
	Frequently	16.7%	19.4%
	Nearly always	77.8%	71%
Adequacy of Performance	Nearly always	2.8%	9.7%
	Frequently	13.9%	22.6%
	Approximately half the time	33.3%	25.8%
	Occasionally	33.3%	29%
	Hardly ever	16.7%	12.9%
Seeking Help	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	6.5%
	Frequently	27.8%	32.3%
	Nearly always	69.4%	61.3%
Offering Assistant	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	6.5%
	Frequently	27.8%	32.3%

	Nearly always	69.4%	61.3%
Reporting Problems	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	6.5%
	Frequently	27.8%	32.3%
	Nearly always	69.4%	61.3%
Cleaning up Work Area	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	9.7%
	Frequently	11.1%	19.4%
	Nearly always	83.3%	71%

The above table 7 shows that majority of the students with mild ID (60%) exhibited higher level of vocational competency in Responsibility skills. Whereas, majority of students with ID (50%) exhibited moderate level of vocational competency in Specifying what is Unclear and Adequacy of performance. In these skills, more percentage of male exhibited higher level of vocational competency compared to female students with mild ID. While, Dixon and Reddacliffe (1996) found out that adult with ID were punctual, honest, helpful and complying with supervisor's requests. Whereas, Tiwari (2011) found out that students with mild and moderate ID were at average level in work behaviour.

(d) Social Emotional Skills

Table 8: Different Levels of Vocational competencies in Social Emotional Skills

Different Levels of Vocational competencies	Statements	% of Students with Mild ID	
		Male	Female
Correcting Errors	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	6.5%
	Frequently	27.8%	32.3%
	Nearly always	69.4%	61.3%
Response to Changes in Routine	Stops working	-	-
	There is a substantial decrease in productivity	-	-
	There is a moderate decrease in productivity	11.1%	16.1%
	There is a small decrease in productivity	41.7%	38.7%
Reaction to Frustration	There is no decrease in productivity	47.2%	45.2%
	Stops working	-	-
	There is a substantial decrease in productivity	-	-
	There is a small decrease in productivity	52.8%	54.8%

	There is no decrease in productivity	47.2%	45.2%
Response to Movement or Noise	Stops working	-	-
	There is a substantial decrease in productivity	-	-
	There is a moderate decrease in productivity	11.1%	16.1%
	There is a small decrease in productivity	41.7%	38.7%
	There is no decrease in productivity	47.2%	45.2%
Accepting Suggestions	Stops working	-	-
	There is a substantial decrease in productivity	-	-
	There is a moderate decrease in productivity	2.8%	6.5%
	There is a small decrease in productivity	27.8%	32.3%
	There is no decrease in productivity	69.4%	61.3%
Reaction to Absence of Supervision	Stops working	-	-
	There is a substantial decrease in productivity	-	-
	There is a moderate decrease in productivity	11.1%	16.1%
	There is a small decrease in productivity	41.7%	38.7%
	There is no decrease in productivity	47.2%	45.2%
Returning from Breaks	Hardly ever	-	-
	Occasionally	-	-
	Approximately half the time	2.8%	9.7%
	Frequently	11.1%	19.4%
	Nearly always	83.3%	71%

The above table 8 shows that majority of the students with mild ID (50%) exhibited higher level of vocational competency in Social-emotional skills. In these skills, more percentage of male exhibited higher level of vocational competency compared to female students with mild ID. This finding contradicts to the findings of Tiwari (2011), Umadevi and Sukumaran (2012). While Herbert and Ishikawa (1991) found out that workers in supportive work program had higher social skills compared to workers in sheltered work program. Further, Black and Rojewski (1998) found out that mean ratings on the social awareness sub- scales were higher for the adolescents with mild ID rated higher in work performance.

4. Conclusion

More percentage of students with mild ID exhibited moderate to high level of vocational competency. While, male students with ID exhibited high level of vocational competency than female students. Hence more training should be given to students with ID who are at low level of vocational competency. This helps them to improve their vocational competency and lead a successful independent living.

References

- Black, R.S., & Rojewski, J.W. (1998). The role of social awareness in the employment success of adolescents with mild mental retardation. *Education and Training in Mental Retardation and Developmental Disabilities*, 33(2), 144-161.
- Dixon, R.M., & Reddacliffe, C. (1996). *Vocational competence in young adults with intellectual disabilities*. Retrieved on 22.06.2013 from www.aare.edu.au/96pap/dixor96141.txt
- Fletcher, K.L., Scott, M.S., Blair, C., & Bolger, K.E. (2004). Specific patterns of cognitive abilities in young children with mild mental retardation. *Education and Training in Developmental Disabilities*, 39(3), 270-278.
- Herbert, J.T., & Ishikawa, T. (1991). Employment-Related Interpersonal Competence among Workers with Mental Retardation. *Vocational Evaluation and Work Adjustment Bulletin/Fall*, 87-94. Retrieved on 22.03.2011 from library.ncrtm.org/pdf/J050.0243.01B.pdf
- Murugan, K.K. (2007). *Development of remedial instructional programmes in environmental studies-II (science) for educable mentally retarded children*. Unpublished Ph.D. Thesis. University of Mysore, Mysore.
- Ratz, C., & Lenhard, W. (2013). Reading skills among students with intellectual disabilities. *Research in Developmental Disabilities*, 34(5), 1740-1748. Retrieved on 22.06.2013 from www.sonderpaedagogik-g.uni-wuerzburg.de/.../Ratz_Lenhard_2013.pdf -
- Tiwari, U. (2011). *A study on work behaviour and work performance among adults with mental retardation*. Unpublished M. Phil Dissertation. Osmania University, Hyderabad.
- Umadevi, V.M., & Sukumaran, P.S. (2012). *Functional social skills of adults with intellectual disability*. Retrieved on 22.06.2013 from dcidj.org/article/download/76/76-
- Vuijk, P.J., Hartman, E., Scherder, E., & Visscher, C. (2010). Motor performance of children with mild intellectual disability and borderline intellectual functioning. *Journal of Intellectual Disability Research*, 54(11), 955-965. Retrieved on 22.06.2013 from dare2.ubvu.vu.nl/bitstream/handle/1871/34889/255254.pdf?...1 -