



Study of multiple intelligences of D.El.Ed. Students in reference to gender

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Abstract

The purpose of this study was to know the effect of 'Gender' on M.I. of D.El.Ed. Students. To find the answer of this curiosity, the present study was conducted by keeping in mind different intelligence predispositions given in the theory of multiple intelligences. A sample of 78 boys and 71 girls and a total 149 D.El.Ed. Students of Govt. and Private D.El.Ed. Institutions of Jodhpur city were selected. The investigator had personally met the participants, introduced about the M.I. and administered the tool. On the basis of data collected Low, Moderate and High groups ($M \pm 0.6745$ S.D.) formed and Mean, SD and T-test were calculated to analyse the data. The findings revealed that the majority of D.El.Ed. Students scored moderate range. Also there was significance effect of Gender on Bodily Kinaesthetic Intelligence and Interpersonal Intelligence. There was no effect of Gender on remaining six intelligences.

Keywords: multiple intelligence, howard gardner, d.el.ed. Students & gender

1. Introduction

The concept of multiple intelligence is given by Prof. Howard Gardner in 1983. These are the effective product or offering a service which are valued in the society, MI varies from person to person and are found in every person as lesser or greater amount. Initially there were 8 types of MI's were found and later existential Intelligence was introduced. Basically MI's are the potential for finding & creating solutions for the problems. This article is based on 8 types of M.I.'s which are as follows -

1. Verbal /Linguistic Intelligence
2. Logical Mathematical Intelligence
3. Visual Spatial Intelligence
4. Bodily Kinaesthetic Intelligence
5. Musical Rhythmic Intelligence
6. Interpersonal Intelligence
7. Intrapersonal Intelligence
8. Naturalist Intelligence

1. **Verbal / Linguistic Intelligence**-(word smart") is the ability to use words and language. It is the ability to think in words rather than pictures. It develops high auditory skills and elegant speaking.
2. **Logical-mathematical intelligence** involves the capacity to analyse problems logically, carry out mathematical functions, and investigate problems scientifically. It includes the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking. High levels of logical intelligence are related to accountants, statisticians, and computer programmers.
3. **Visual Spatial intelligence** is the potential to recognize and use the patterns of wide space and more confined areas and is associated with ones' visual capacity. Illustrators, interior decorators, architect, graphics designer, and photographers can be found in this category.

4. **Bodily-kinaesthetic intelligence** involves the potential of using one's whole body or parts of the body to solve problems by using mental abilities to coordinate bodily movements. This includes athletes and dancers as well as mechanics, surgeons and crafts persons.
5. **Musical Rhythmic intelligence** involves the performance, composition, and appreciation of musical patterns as well as the capacity to recognize and compose musical pitches, tones, and rhythms. Gardner also claims that musical intelligence is structurally parallel to linguistic intelligence.
6. **Interpersonal intelligence** is concerned with the capacity to understand the intentions, motivations and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders and counsellors all need a well-developed interpersonal intelligence.
7. **Intrapersonal intelligence** entails the capacity to understand oneself, to appreciate one's feelings, fears and motivations. In Gardner's view it involves having an effective working model of ourselves, and to be able to use such information to regulate our lives. Counsellors, planners, social workers, psychologists, writers and religious leaders are related to intrapersonal intelligence.
8. **Naturalist intelligence** deals with classification abilities or the flora and fauna of one's environment. Biologist would be classified as naturalist as would those individuals who have the ability to recognize and identify species and subspecies.

Statement of the problem

The present study was conducted on the D.El.Ed. Students to know the effect of multiple intelligences in reference to gender. The research problem was worded as follows. A Study of Multiple Intelligences of D.El.Ed. Students in Reference to Gender:

Objectives of the study

Objectives of present study were as follow:

1. To study the multiple intelligence of D.El.Ed. Students.
2. To study the effect of gender on the multiple intelligence of D.El.Ed. Students.

Hypothesis: Following null hypothesis was formulated for the objectives of the study. "There will be no significance difference in the mean score of the multiple intelligence of the male and female D.El.Ed. Students"

Sub Hypothesis

- 1.1 There will be no significance difference in the Mean Score on the VI of the Male and Female D.El.Ed. Students.
- 1.2 There will be no significance difference in the Mean Score on the LMI of the Male and Female D.El.Ed. Students.
- 1.3 There will be no significance difference in the Mean Score on the VSI of the Male and Female D.El.Ed. Students.
- 1.4 There will be no significance difference in the Mean Score on the BKT of the Male and Female D.El.Ed. Students.
- 1.5 There will be no significance difference in the Mean Score on the MRI of the Male and Female D.El.Ed. Students.
- 1.6 There will be no significance difference in the Mean Score on the Interpersonal Int. of the Male and Female D.El.Ed. Students.
- 1.7 There will be no significance difference in the Mean Score on the Intrapersonal Intelligence of the Male and Female D.El.Ed. Students.
- 1.8 There will be no significance difference in the Mean Score on the NI of the Male and Female D.El.Ed. Students.

Variables included in the study

Dependent and independent variables of the present study are as follows -Independent variables –gender i.e. male and female D.El.Ed. Students. Dependent variables - multiple intelligence i.e. VI, LMI, VSI, BKT, MRI, Interp. I, Intrap. I, and N. I.

Importance of the study

The knowledge created through this research will be useful to following different concerning parties

- The findings of the study will help in understanding the individual differences in the D. El. Ed. Students.
- The knowledge about the multiple intelligences of the D.El.Ed students will facilitate the curriculum developers in including and emphasizing different Intelligence.
- The knowledge of multiple intelligence will help in guidance and counselling of D. El. Ed. students.
- Translated version of tool constructed in the present study will help to know the multiple intelligence of the D.El.Ed. students

Limitations and Delimitations of the study

Following are the limitations & Delimitations of the study

- The study was delimited to the Hindi medium. D.El.Ed. students of Jodhpur city.
- Hindi version standardized tool MISA Swas used for data collection.

- The present study included gender as variables.

Definitions of key terms

1. Eight types of multiple intelligence ready mentioned.
2. D.El.Ed. students - IST Year D.El.Ed. Students of Govt. & Private institute of Jodhpur city.
3. Gender - here refers to male D.El.Ed students & female D.El.Ed. Students.

Population and Sampling

The population in the study consisted of the Hindi medium D.El.Ed male and female students of Jodhpur city. Total of 149 D.El.Ed. Students were selected from these institutions by using simple random technique and out and of which 78 male and 71 female students were in numbers.

Research Method

For the present study, the investigator selected descriptive type of survey method because it studied the current status of MI of D.El.Ed. Students of Jodhpur city.

Tool constructed

There are different types of tools used in various research which are in English version. The researcher made an attempt to prepare the MISAS in Hindi language for local setting.

- a. The tool having speculations as such there are 117 items covering all 8 types of multiple intelligences
- b. This tool was taken experts opinion and changes accordingly were made to finalise the tool to test.
- c. Test-retest was exercised and about more than - 100 students were chosen for pilot study.

Data Analysis

The score in each component of the M.I. tool was calculated for each student for further statistical analysis. Then they were classified according to different variables. The mean score of the whole group was calculated for each component. The significance in the difference of mean scores was tested using Critical Ratio (sampled>30). Thus mean, standard deviation, CR ratio were employed to test the hypothesis.

Interpretation of Data

The obtained datas were analysed objective wise and the results are presented as below

Objective

1 To study of multiple intelligence of D.El.Ed. Students. To test the above objective, the datas are classified in low, moderate & higher group by using the following formula $M \pm 0.6745SD$. The details of groups are as below.

Table 1: Detail of classified group.

Criteria	Category
$M \pm 0.6745SD$ & above	High group
Between $M - 0.6745SD$ to $M + 0.6745SD$	Moderate (Average)
$M - 0.6745SD$ & Below	Low group

Table 2: level of multiple intelligence of the D.EL.E.D. Students.

N=149	High		Moderate		Low	
	N	%	N	%	N	%
VI	41	27.52	70	46.98	38	25.50
LMI	33	22.15	79	53.02	37	24.83
VSI	37	24.83	77	51.68	35	23.49
BKI	40	26.84	67	44.97	42	28.19
MRI	38	25.50	77	51.68	34	22.82
INTERP.I	34	22.82	82	55.03	33	22.15
INTRAP.I	37	24.83	83	55.71	29	19.46
N.I.	40	26.84	78	52.35	31	20.81

Here VI= Verbal / Linguistic Intelligence
 LMI= Logical-mathematical Intelligence
 VSI= Visual Spatial Intelligence
 BKI= Bodily-kinaesthetic Intelligence
 MRI= Musical Rhythmic Intelligence
 INTERP.I= Interpersonal Intelligence
 INTRAP.I= Intrapersonal Intelligence
 N.I. = Naturalist Intelligence

The above table shows about the profile of the percent of D. EL.ED students that were classified as either having high, moderate and low level of intelligences for each of multiple intelligence domain. It is inferred from the table that-

1. Over all the majority of the D.EL.ED students i.e. 46.28% scored moderate range for Verbal / Linguistic Intelligence while 27.52% were in high range where as 25.6% in low range.

2. With range of Logical-mathematical Intelligence the 53.02% D.EL.ED students possess the moderate range while 22.15% high range where as 24.83% possess low range.
3. In terms of Visual Spatial Intelligence 51.68%. Were assessed with a moderate level, 24.83% high & 23.49% with low level of Visual Spatial Intelligence.
4. With regard to Bodily-Kinaesthetic Intelligence 44.97% scored in the moderate range while 26.84% felt in high range where as 28.19%. In low range.
5. In case of Musical Rhythmic Intelligence the highest proportion i.e. 51.68%. D.El.Ed. Students was in the moderate range while 25.50% felt in high range where as 22.82% are in low range.
6. It is also apparent that the greatest proportion of score i.e. 55.03% in Interpersonal area of intelligence was in moderate range while 22.82% & 22.15% in high & low range respectively.
7. For the Intrapersonal intelligence 55.71% of D. El. Ed students fall immoderate range, 24.83% are in high range whereas only 19.46% are in low range of intelligence.
8. Naturalist intelligence, the largest proposition i.e. 52.35%. D. El. Ed students were felt moderate range while 26.84% in high level of naturalist intelligence where as 20.81%. Was in low range of intelligence.

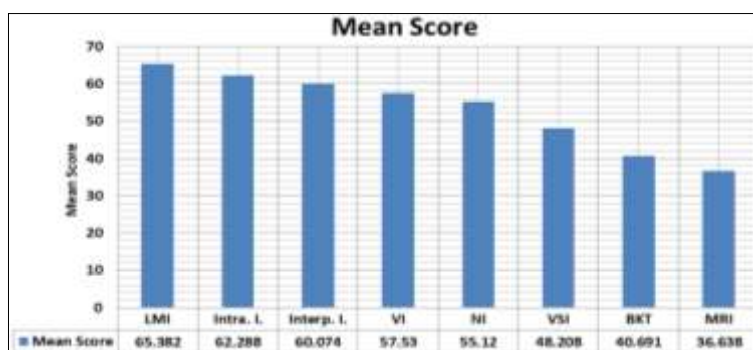
Table 3: Descriptive statistics of different type of multiple intelligence profiles of D.EL.ED students

M.I.	VI	LMI	VSI	BKI	MRI	INTERP.I	INTRAP.I	N.I.	T
G. Total Mean	57.53	65.382	48.208	40.691	36.638	60.074	62.288	55.120	425.148
N=149 SD	4.718	9.514	6.018	4.015	8.020	7.310	5.740	7.692	37.728

Here VI= Verbal / Linguistic Intelligence
 LMI= Logical-mathematical Intelligence
 VSI= Visual Spatial Intelligence
 BKI= Bodily-kinaesthetic Intelligence
 MRI= Musical Rhythmic Intelligence
 INTERP.I= Interpersonal Intelligence
 INTRAP.I= Intrapersonal Intelligence
 N.I. = Naturalist Intelligence

From the table-3 and Graph it is inferred that the highest mean score among the eight multiple intelligences was in the verbal / linguistic intelligence with 65.382. Then other intelligences had mean score in descending order respectively 62.288 for intrapersonal intelligence., 60.074

for interpersonal intelligence., 57.53 for verbal / linguistic intelligence, 55.12 for naturalist intelligence, 48.208 for visual spatial intelligence, 40.691 for bodily-kinaesthetic intelligence and the lowest 36.638 for the musical rhythmic intelligence.



Graph 1: Shows the nature of the group wise respect to the multiple intelligence.

Objective

2 - To study the effect of gender on the multiple intelligence. Of D.EL.ED students.
 Following Null hypothesis was formulated for this objective

to study. “There will be no significance difference in the mean score of the multiple intelligence of male & female D.El. Ed. students.”
 To verify the hypothesis, the mean, SD and CR ratio was

calculated for the multiple intelligence of male & female D.El. Ed. students.

The calculated values are shown in the following table no.4

Table 4: Significance of difference between dimensions of multiple intelligence of male &female D.El.ED students, mean and standard deviation and CR ratio of D.El.ED students multiple intelligence. Number Male 78, Female 71.

Hypothesis	Intelligence	Gender	N	Mean	SD	SED	CR ratio	Remark
1.1	VI	M	78	57.91	7.363	1.192	0.669	NS
		F	71	57.113	7.181			
1.2	LMI	M	78	65.628	10.545	1.542	0.334	NS
		F	71	65.113	8.225			
1.3	VSI	M	78	48.218	6.230	0.984	0.021	NS
		F	71	48.197	5.777			
1.4	BKI	M	78	41.743	5.095	0.864	2.556	0.01*
		F	71	39.535	5.430			
1.5	MRI	M	78	36.949	9.017	1.297	0.513	NS
		F	71	36.296	6.741			
1.6	INTERP.I	M	78	62.000	6.744	1.157	3.494	0.01*
		F	71	57.958	7.324			
1.7	INTRAP.I	M	78	62.974	5.383	0.936	1.537	NS
		F	71	61.535	5.985			
1.8	NI	M	78	55.923	7.230	1.261	1.335	NS
		F	71	54.239	8.078			

* Significance difference at 0.01 level

Findings

1. There was significance effect of gender on bodily kinaesthetic Intelligence.
Male D.El.Ed. Students were superior to Female D. El. Ed. students in B.K.I. This shows that male having more potential them female.
2. There was significance effect of gender on Interpersonal Intelligence. Male D.El.Ed students were superior to female D.El.Ed students in Interpersonal intelligence. This shows that male are more. Cooperative and helping others than female.
3. There was no significance effect of gender on VI, LMI, VSI, MRI, Intrapersonal intelligence and N.I. Thus male and female shows similar magnitude of the above dimension of M.I.

guidance.

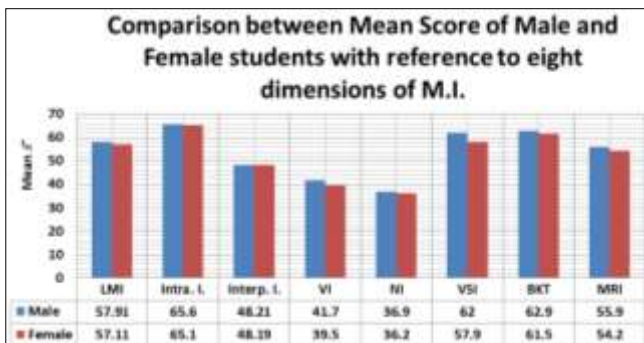
Hence above hypothesis was partially accepted.

Conclusion

The present study was conducted to know the M.I. Of D.El.Ed. Students. The findings were obtained from the data collection using survey research method. The researcher tried to create such knowledge that is useful in the world of education. This attempt will be considered fruitful if any findings of the study are useful in making the educational systems more effective.

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Graph 2: Comparison between mean score of Male &Female students with reference to eight dimensions of M.I.

Implications

- Following were the implications based on the findings.
1. Male D.EL.ED. Students should be motivated to do physique related work and involve themselves in physical activities.
 2. Male D.El.Ed students should be motivated to help others and remain more sensitive for helping others and cooperative.
 3. Male students can be suggested physical education courses and managerial courses during educational

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