A STUDY ON THE EFFECT OF MULTIPLE INTELLIGENCE ON THE ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

Research Paper

ABSTRACT

This article presents the impact of Multiple Intelligence on the academic achievement of Higher Secondary students. The sample consists of 1092 students from various Higher Secondary schools of Pattanamthitta, Kollam, Trivandrum and Alappuzha districts of Kerala State. The Multiple Intelligence Inventory was prepared and validated by the Investigator herself and for Academic Achievement, marks from the S.S.L.C examination were used. It was found that plus one students show more logical mathematical intelligence than plus two students. Also Co-education students show more interpersonal intelligence than Girl's school students and there is no significant difference between Higher Secondary Students in their Achievement. There is significant relationship between verbal and logical mathematical intelligence and the achievement of Higher Secondary students.

INTRODUCTION

In this twenty first century, man is leading a mechanical life. People living here and there in this world are prompting youngsters to use their vital energy in scoring high marks in the academic field. They are ignoring the efficiency of children in other field. By concentrating only on their performance in examinations, they are spoiling the energetic generations in the early stage itself. Time has come to change our style of education. We have to accept the idea that pupils are intelligent in one area or the other. Here comes the importance of implementing Multiple Intelligence in our traditional system of schooling. The theory of multiple intelligence challenges the traditional view of intelligence as a unitary capacity that can be adequately measured by IQ tests. Gardner asserted that each person has multiple intelligence. The investigator attempts to study the impact of Multiple Intelligence on the Academic Achievement of Higher Secondary students.

OBJECTIVES OF THE STUDY

1. To find out the level of Multiple Intelligence in Higher Secondary students.
2. To find out the level of academic achievement in Higher Secondary students.
3. To find out whether there is any significant difference in Multiple Intelligence in Higher Secondary students with respect to background variables.
4. To find out whether there is any-significant difference in the academic achievement of Higher Secondary students with respect to background variables.
5. To find out whether there is any significant relationship between Multiple Intelligence and the academic achievement of Higher Secondary students.

HYPOTHESES OF THE STUDY

1. The level of Multiple Intelligence in Higher Secondary students is average.
2. The level of academic achievement in Higher Secondary students is average.
3. There is no significant difference in Multiple Intelligence in Higher Secondary students with respect to class.

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4. There is no significant difference in Multiple Intelligence in Higher Secondary students with respect to type of school.

5. There is no significant difference in the academic achievement of Higher Secondary students with respect to background variables such as class and type of school.

6. There is no significant relationship between Multiple Intelligence and the academic achievement of Higher Secondary students.

TITLE OF THE PROBLEM

A STUDY ON THE EFFECT OF MULTIPLE INTELLIGENCE ON THE ACADEMIC ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

METHOD SELECTED

The investigator selected the Normative Survey Method for the study.

POPULATION AND SAMPLE

Population includes Higher Secondary students of Pattanamthitta, Kollam, Trivandrum and Alappuzha districts of Kerala state. The sample consists of 1092 Higher Secondary students from various schools of Pattanamthitta, Kollam, Trivandrum and Alappuzha districts selected by multi-stage random design.

TOOLS

Tool includes the Multiple Intelligence Inventory prepared and validated by the investigator herself. For Academic Achievement, marks from the annual examination of S.S.L.C. were collected

STATISTICS USED

Statistics of the study include t-test and correlation analysis.

ANALYSIS AND INTERPRETATION

Hypothesis : 1

Level of Multiple Intelligence in Higher Secondary students is average.

Table 1

LEVEL OF MULTIPLE INTELLIGENCE IN HIGHER SECONDARY STUDENTS

Sample	Multiple intelligence	Low		Average		High	
		N	%	N	%	N	%
Higher Secondary students	Verbal	358	32.78	364	33.33	370	33.88
	Logical mathematical	323	39.57	285	26.09	484	44.32
	Spatial	329	30.12	385	35.25	378	34.61
	Musical	385	35.25	398	36.44	309	28.29
	Bodily kinesthetic	425	38.91	413	37.82	254	23.26
	Interpersonal	318	29.12	323	29.76	449	41.11
	Intrapersonal	324	29.67	318	29.12	450	41.21
	Naturalistic	385	35.25	323	29.58	384	35.16

From the above table it is inferred that a majority of Higher Secondary students have (33.88%) high level of verbal intelligence, (44.32%) have high level of logical mathematical intelligence, (35.25%) have average level of spatial intelligence, (36.44%) have average level of musical intelligence, (38.91%) have low level of bodily kinesthetic intelligence, (41.11%) have high level of interpersonal intelligence, (41.21%) have high level of intrapersonal intelligence and (35.25%) have low level of naturalistic intelligence.

Hypothesis : 2

Level of academic achievement in Higher Secondary students is average.

Table 2

LEVEL OF ACADEMIC ACHIEVEMENT IN HIGHER SECONDARY STUDENTS

Sample	Variable	Low		Average		High	
		N	%	N	%	N	%
Higher Secondary students	Academic Achievement	327	29.94	533	48.8	232	21.24

From the above table it is inferred that a majority of Higher Secondary students have (48.80) average level of academic achievement.

Hypothesis : 3

There is no significant difference between plus one and plus two students in their Multiple Intelligence.

Table : 3

MEAN, STANDARD DEVIATION AND 't' VALUE OF HIGHER SECONDARY STUDENTS IN THEIR MULTIPLE INTELLIGENCE WITH REFERENCE TO CLASS

Variable	Multiple Intelligence	Plus one		Plus two		t-value	Remarks
		Mean	S.D.	Mean	S.D.		
Class	Verbal	21.97	4.599	22.07	4.717	0.355	NS
	Logical Mathematical	21.6	4.518	21.06	4.917	5.357	S
	Spatial	21.17	4.816	20.89	4.741	0.966	NS
	Musical	20.03	5.114	20.16	5.363	0.408	NS
	Bodily kinesthetic	20.29	5.197	20.47	5.179	0.571	NS
	Interpersonal	20.02	5.031	19.75	4.996	0.121	NS
	Intrapersonal	20.24	5.099	20.18	5.142	0.193	NS
	Naturalistic	21.21	5.339	21.48	5.543	0.816	NS

(At 5% level of significance the table value of t is 1.96)

Since the calculated values of 't' are lesser than the table value at 5% level of significance except in Logical Mathematical intelligence, the null hypothesis "There is no significant difference between plus one and plus two students in their Multiple Intelligence" is accepted except in Logical Mathematical intelligence. Hence there is significant difference between plus one and plus two students in their Logical Mathematical intelligence.

Hypothesis : 4

There is no significant difference between co-education and Girls' school students in their Multiple Intelligence.

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Table : 4

MEAN, STANDARD DEVIATION AND 't' VALUE OF HIGHER SECONDARY STUDENTS IN THEIR MULTIPLE INTELLIGENCE WITH REFERENCE TO TYPE OF SCHOOL

Variable	Multiple Intelligence	Co-education		Girls'		t-value	Remark
Type of school	Verbal	22.01	4.651	22.1	4.503	0.91	NS
	Logical Mathematical	21.42	4.698	21	4.789	1	NS
	Spatial	21.14	4.727	20.5	5.03	1.52	NS
	Musical	20.16	5.199	20	5.392	0.36	NS
	Bodily kinesthetic	20.46	5.147	19.9	5.375	1.3	NS
	Interpersonal	20.22	7.406	19.2	4.981	2.31	S
	Intrapersonal	20.18	5.073	20.4	5.348	0.48	NS
	Naturalistic	21.24	5.453	21.8	5.322	1.35	NS

(At 5% level of significance the table value of t is 1.96)

Since the calculated values of 't' are lesser than the table value at 5% level of significance except in Interpersonal Intelligence, the null hypothesis. "There is no significant difference between Co-education and Girls' school students in their Multiple Intelligence". is accepted except in Interpersonal Intelligence. So there is significant difference between Co-education and Girls' school students in their Interpersonal Intelligence.

Hypothesis : 5

There is no significant difference between Higher Secondary students in their achievement with reference to background variables.

Table : 5

MEAN, STANDARD DEVIATION AND 't' VALUE OF HIGHER SECONDARY STUDENTS IN THEIR ACHIEVEMENT WITH REFERENCE TO BACKGROUND VARIABLES

Variable	Category	Mean	S.D.	t-value	Remarks
Class	Plus one	408.51	74.112	0.1489	NS
	Plus two	407.83	76.15		
Type of school	Co-education	407.54	75.71	0.6726	NS
	Girls'	411.52	71.52		

At 5% level of significance the table value of t is 1.96

Since the calculated values of 't' are lesser than the table value at 5% level of significance, the null hypothesis "There is no significant difference between Higher Secondary students in their achievement". is accepted. Hence there is no significant difference between Higher Secondary students in their achievement.

Hypothesis : 6

There is no significant relationship between multiple intelligence and academic achievement of Higher Secondary students.

Table : 6

RELATIONSHIP BETWEEN MULTIPLE INTELLIGENCE AND ACHIEVEMENT OF HIGHER SECONDARY STUDENTS

Sl. No.	N	Multiple Intelligence	'r'value	Table value	Remark
1	1092	Verbal	0.245	0.062	S
2		Logical Mathematical	0.288		S
3		Spatial	0.023		NS
4		Musical	0.015		NS
5		Bodily kinesthetic	0.054		NS
6		Interpersonal	0.023		NS
7		Intrapersonal	0.052		NS
8		Naturalistic	0.048		NS

From the above table it is inferred that the calculated 'r' values are lesser than the table values except in verbal and logical mathematical intelligence at 5% level of significance. Hence the null hypothesis "There is no significant relationship between multiple intelligence and achievement of Higher Secondary students". is accepted except in verbal and logical mathematical intelligence. Thus there is significant relationship between verbal and logical mathematical intelligence and achievement of Higher Secondary students.

FINDINGS OF THE STUDY

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1. A majority of higher secondary students have (33.88%) high level of verba Lintelligence, (44.32%) have high level of logical mathematical intelligence, (35.25%) have average level of spatial intelligence, (36.44%) have average level of musical intelligence, (38.91%) have low level of bodily kinesthetic intelligence, (41.11%) have high level of interpersonal intelligence, (41.21%) have high level of intrapersonal intelligence and (35.25%) have low level of naturalistic intelligence.
2. A majority of higher secondary students (48.80%) have average level of achievement.
3. There is significant difference between plus one and plus two students in their logical mathematical intelligence. Plus one students show more logical mathematical intelligence than plus two students.
4. There is significant difference between Co-education and Girls' school students in their Interpersonal Intelligence. Co-education students show more Interpersonal Intelligence than Girls' school students.
5. There is no significant difference between Higher Secondary students in their achievement.
6. There is significant relationship between verbal and logical mathematical intelligence and achievement of Higher Secondary students.

Since verbal and logical mathematical intelligence are related with achievement, teachers must take steps to pay special attention to develop such intelligence and thereby improve the progress of children.

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