Study on Effect of Intelligence & Academic Motivation on Academic Achievement of Tribal & Non Tribal Students of Class X

ABSTRACT ::

The academic achievement is correlates of psychological variables. This research work was conducted on a sample of 250 Tribal and 250 non Tribal students studying in Secondary School in Panchmahal district with a view to finding out the effect of the Intelligence and Academic Motivation on their Academic Achievement of the pupils in tribal secondary schools. This sample was taken from the students of non government high schools of tribal area district who significantly differ in their Intelligence and Academic Motivation. Desai's verbal - non verbal group test of Intelligence was administered to the students. Academic Motivation test was developed by Researcher and administered to the students. This students' Academic Achievement tool is last preliminary examination score in March, 2009. The mean value analysis of significance of the mean difference and the values were calculated, other calculation is mean value analysis of variance and F - test. The findings show that there is no significant difference in the I. Q. and Academic Motivation of standard : X students in the secondary schools of tribal area of the Panchmahals District.

Introduction : -

Many researchers have found that Intelligence and Academic Motivation is one of the factors contributing to the academic achievement of students as such the present study tries to a certain whether there is any significant difference in the academic achievement of the pupils studying in secondary schools. Academic Motivation means the ways of studying whether systematically or unsystematically efficiently or otherwise study can be interpreted as a Planned Programme of subject mastery.

Intelligence cover all related aspects of verbal I. Q. and non verbal I. Q. other way components of Intelligence is understanding, classification, words of opposite, reasoning ability, same relation, number ability, arrangement sentence etc. Academic Motivation cover all related main aspects of attitudes towards school, aspiration of academic and present studying students of study habits. Many researchers say academic motivation and academic achievement is related variables.

We find in Intelligence was related to n-ach, socio cultural status, academic achievement (Singh. R., 1986), (Prakash, 1986) and self identify (sahai, S. K., 1985), the period under review is not strikingly different from the earlier one (Sinha, S. K., 1977) reported negative attitudes towards the present examination system using a Likert - type questionnaires among university students, teacher and guardians. Kumari Sudha (1982) study that there were significant differences among the four sociometric groups in case of Intelligence and Achievement. Dixit, Mithilesh Kumari (1985) study at all the other intellectuals levels the academic achievement of the girls was superior to that of the boys. In case of the boys there was very high correlation between intelligence test scores and academic achievement.

Objectives : -

The objectives of the present study are as such :

- To study the academic achievement of Tribal and non Tribal students.
- To study the effects of Intelligence and Academic Motivation on the levels of academic achievement.

- To study the interactional effects of Intelligence and academic motivation on academic achievement of Tribal and non Tribal students.

Design : -

Sample : - 7 tribal and non tribal high secondary schools covering 50 % of the total population from the total number of 12 schools located in Panchmahals district were selected on random basis all the students both Tribal and non Tribal studying in X standard were Desai Verbal - Non Verbal Group Intelligence Test. Researcher developed a test of academic motivation were administered this study. Thus the sample included 250 Tribal and 250 non Tribal students.

Tools : -In the present study for finding of the affects of I. Q. and academic motivation on the academic achievement the main objectives of this study. Researcher has developed Educational Progress Report for Research Sample Variable of Education achievement is tool of school preliminary examination in March 2009. Percentage score present study is for finding out the I. Q. and Academic Motivation of students of class X. The I. Q test developed by K. G. Desai has been used. The test consists of 80 item classified into eight test battery, classified into eight categories viz. understanding, classification, words of opposite, reasoning ability, same relation number ability, unarrangement sentence etc. The test includes some items which discriminate students at 0.01 level and 0.05 level. Some item into inventory are of diagnostic nature.

The academic motivation test developed by Researcher has been used the test consists of 120 item classified into three sub - inventory of 40 items classified into three categories viz. attitudes towards school, academic aspiration and study habits. Each item in the inventory is to be ticked by students against "agree", "partly agree", "disagree". The respondent is required to tick only one choice against those three choices which we think is best applicable to his / her. In case of the sub variables depicting goods Academic Motivation, the student has to be given three marks if he puts, a tick in the column of three, two, one marks are to be given if he puts a tick mark in the column of agree, partly agree, disagree. In the case of statements depicting bad Academic Motivation. The Academic Motivation Test score is between 120 to 360 in positive and negative items. High scores on the inventory will indicate good Academic Motivation and vice versa.

Hypotheses : -The following null hypothesis is stated for the present investigation.

- H01- There is no significant effect of Intelligence on the levels of academic achievement of Tribal and non Tribal students.
- H02- There is no significant effect of Academic Motivation on the level of Academic Achievement of Tribal and non Tribal students.
- H03- There is no significant effect of the main difference of Academic Achievement of Tribal and non Tribal students.
- H04- There is no significant Interactional effect of I. Q. X caste on the Academic Achievement of Tribal and non Tribal students.
- H05- There is no significant Interactional effect of Academic Motivation X caste on the Academic Achievement of non Tribal students.

DATA : -The data collected were of quantitative nature in the form of the score of I. Q. Academic Motivation and Academic Achievement of the pupils of standard X.

Analysis : -The sample of this study is taken from selected 12 schools. It was observed that one school a co education school had results which were consistently superior to the results of the other 7 school. It was named better high achieving school having 250 Tribal and 250 non Tribal students.

Table : 1
Relation between Academic Achievement of Tribal and non Tribal students.

Group of Sample	N	M	MD	SD	CR Value	Levels of Significances

Tribal students	250	44.00	42.3	10.15	4.97	Significant at 0.01 level
Non Tribal students	250	48.72	42.3	11.092		

Table : 2

I. Q. and Academic Motivation of the high, medium and low Academic Achievement between Tribal and non-Tribal students.

Variable	Level of Academic Achievement	High				Medium				Low			
		55 to 70				40 to 54				below 39			
		N	M	6	t Value	N	M	6	t Value	N	M	6	t Value
1	2	3	4	5	6	7	8	9	10	11	12	13	14
I. Q. and Caste	Tribal	36	120.7	14.7	10.29**	166	115.6	13.4	11.74**	48	90.5	17.5	0.57*
	Non-Tribal	48	125.1	16.5		170	118.5	14.7		32	92.6	15.2	
Academic Motivation and Caste	Tribal	36	321.7	10.3	4.54**	166	308.1	13.4	3.14**	48	312.7	11.7	2.15**
	Non-Tribal	48	310.3	12.7		170	303.7	12.4		32	306.4	13.6	

* Non Significant at 0.05 level
** Significant at 0.05 or 0.01 level

Table : 3

Two factorial design analysis of variance of the effect of caste (Tribal - Non - Tribal) X I. Q. on Academic Achievement

Caste		High	Medium	Low
		A1B1	A2B1	A3B1
Tribal Students	N	20	120	45
	Ex	1210	3544	3474
	-X	60.5	46.2	38.6
	Ex2	462101	483118	320138

Non - Tribal Students	N	46	150	74
	Ex	2700	7514	3084
	-X	58.7	50.1	41.7
	Ex2	420640	397120	362898

Table : 4
Two factorial design analysis of variance of the effect of caste (Tribal - Non - Tribal) X I. Q. on
Academic Motivation on Academic Achievement.
A - Academic Motivation

Caste		High	Medium	Low
		A1B1	**A2B1**	**A3B1**
Tribal Students	N	32	146	64
	Ex	1786	6496	3244
	-X	55.8	44.5	50.7
	Ex2	366718	427114	66994
Non - Tribal Students	N	34	124	100
	Ex	2064	3246	4380
	-X	70.7	42.3	43.8
	Ex2	380116	336894	65552

Table : 5
Significant of F- Value

Inter- actional Variable	Origin of	df	SS	MS	F Value	Significant of F
1	**2**	**3**	**4**	**5**	**6**	**7**
	* Independent Variable - 1 I. Q.	1	122.72	122.72	0.039	not significant at 0.05 level

Caste X I. Q.	* Independent Variable - 2 Caste	2	10424.23	10424.23	3.35	Significant at 0.05 level
	* I. Q.					
	X Caste	2	260.15	130.075	0.042	not significant at 0.05 level
	* error	488	759567.26	3117.9		
Caste X Academic Motivation	* Independent Variable - 1 Academic Motivation	1	86.96	86.96	0.0777	not significant at 0.05 level
	* Independent Variable - 2 Caste	2	7671.4	3835.7	3.02	Significant at 0.05 level and 0.01 levels
	* Academic Motivation	2	534.39	267.2	0.24	Not significant at 0.05 level
	X Caste					
	* error	488	275584.5	1129.4		

Interpretation of Tables and Testing of Hypothesis :

The study of Table - 1 shows that t- value is significant at 0.01 level constructed by research H03 is "There is no significant of the mean difference of Academic Achievement of Tribal and Non-Tribal students" tested t- value is 4.97 which is significant. If we reject of there is significant of the mean difference of Academic Achievement between Tribal and Non-Tribal students.

H01 : There is no significant effect of Intelligence on the levels of academic Achievement between Tribal and Non-Tribal students "tested t. value is 10.29, 11.74, 0.57 (I. Q. High, Medium Academic Achievement of the Tribal and Non-Tribal students) which is significant if we reject of this Null hypothesis, but I. Q. of low Academic Achievement of the Tribal and Non-Tribal students which is not significant. If we accept of this Null hypothesis.

H04 : "There is no significant interactional effects of I. Q. X caste on the Academic Achievement of Tribal and Non-Tribal students" tested F. value is 0.042 which is not significant. If we accept of no significant interactional effects of I. Q. X caste on the Academic Achievement of Tribal and Non-Tribal students.

H05 : "There is no significant interactional effect of Academic Motivation X caste on the Academic Achievement of Tribal and Non-Tribal students" tested F- value is 0.24 which is not significant. If we accept of no significant interactional effects of Academic Motivation X caste on the Academic Achievement of Tribal and Non-Tribal students.

H02 : "There is no significant effect of Academic Motivation on the levels of Academic Achievement of Tribal and Non-Tribal students" tested t- value is 4.54, 3.14, 2.15 (Academic Motivation of High,

Medium, Low Academic Achievement of the Tribal and Non-Tribal students) which is significant at 0.05 or 0.01 levels. If we reject of this null hypothesis.

Finding :

There is significant effect of Intelligence on the level (High, Medium Academic Achievement) of the Academic Achievement between Tribal and Non-Tribal students.

- There is significant effect of Academic Motivation on the levels of the Academic Achievement between Tribal and Non-Tribal students.
- There is significant of the mean difference of Academic Achievement of Tribal and Non-Tribal students.
- There is no significant interactional effects of I. Q. X Caste on the Academic Achievement of Tribal and Non-Tribal students.
- There is no significant interactional effect of Academic Motivation X Caste on the Academic Achievement of Tribal and Non-Tribal students.

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