



Learning Style Preferences of Secondary School Students in Relation to Achievement Motivation Belonging to Non Working Mothers

KEYWORDS

Learning styles, achievement motivation, intelligence, self concept

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ABSTRACT *Learning style preferences among secondary school students of non-working mothers from Jammu district (J&K) in relation to achievement motivation were studied. The results found significant cumulative effect of intelligence, achievement motivation and sex on learning styles of secondary school students.*

Introduction

Learning is a permanent change in behaviour brought about by activity, training or experience. But not all changes in behaviour are learning. Changes or modifications also occur through fatigue, drugs, illness, warm ups and through maturation but the behavioural changes brought about by first four are transitory whereas learning involves relatively permanent changes.

There are seven sets of learning styles i.e. Flexible V/S Non Flexible, Individualistic V/S Non-Individualistic, Visual V/S Aural, Field Independent V/S Field dependent, short attention span V/S long attention span, Motivation centered V/S Motivation non-centered and Environment oriented V/S Environment free learning styles.

Achievement motivation is expectancy of finding satisfaction in mastery of difficult and challenging performances whereas, in field of education in particular it stands for pursuit of excellence.

Various studies revealed a significant relationship between academic performance and motivation (Broussard and Garrison, 2004; Skaalvik & Skaalvik, 2006; Sandra, 2002)

Intelligence is aggregate or global capacity of the individual to act purposefully, think rationally and deal effectively within the constraints of environment.

Realizing the paramount significance of learning styles in the teaching-learning processes, a number of researchers in western countries have conducted research on learning styles of students at different levels of education and attempted to explore their relationship with many socio-psychological variables. However, in India, it is a most neglected domain of research, only a few researchers (Aggarwal, 1982; 1983; Verma and Sharma, 1987) have shown some initiation in this newly emerged area. In view of the dearth of studies on learning styles in India, the investigator thought it worthwhile to investigate the learning style preferences among secondary school students of non-working mothers in relation to their achievement motivation.

The teacher's task is quite challenging as without the knowledge of self concept, achievement motivation and other personality traits of students, one can not guide the child in proper manner. Researchers have clearly revealed that there are individual differences as no two individuals are alike. Children differ in age, learning styles, their self

concepts achievement motivation, interests, intelligence and many other traits.

Sample

The sample of study consists of 1300 secondary school students from different schools of Jammu District. Out of these, 220 boys and 147 girls belonged to working mothers and 576 boys and 357 girls belonged to non-working mothers. Stratified random sampling technique has been used in selection of the sample from the target sample.

Tools used

The following tools have been used in present study:

1. Ahluwalia's self Concept inventory .
2. Mukherjee's Achievement Motivation Test.
3. M.C. Joshi's General Mental Ability Test.
4. S.C.Aggarwal's learning style Inventory.

Statistical Techniques used

The analysis of variance (ANOVA) was applied to the main factors A,B&C corresponding to intelligence achievement motivation and sex respectively. The double interactional effects $A \times B$, $A \times C$ and $B \times C$ and the triple interactional effect $A \times B \times C$ were studied.

Analysis /Interpretation of Results

Table 1: Summary of the Three Way ANOVA (3x2x2) Factorial Experiment for the learning Style (Flexible V/s Non Flexible) scores with varying degree of achievement motivation among secondary school students belonging to non-working mothers:

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	1.07	2.00	0.53	0.24	Insignificant
Ach. Motivation (B)	0.03	1.00	0.03	0.02	Insignificant
Sex (C)	3.33	1.00	3.33	1.53	Insignificant
Intelligence and Achievement motivation(AxB)	28.87	2.00	14.43	6.61	Significant
Intelligence and Sex (AxC)	1.67	2.00	0.83	0.38	Insignificant
Ach. Motivation & Sex (BxC)	0.03	1.00	0.03	0.02	Insignificant

Intelligence, Achievement Motivation and Sex (AxBxC)	37.27	2.00	18.63	8.54	Significant
Within	235.60	108.0	2.18		

Table 1 shows that there was significant difference in intelligence and achievement motivation taken together among secondary school students belonging to non-working mothers having flexible & non-flexible learning style. Table 1 further shows there was found cumulative effect of intelligence achievement motivation and sex on the aforesaid learning style.

TABLE 2: Summary of 3-way ANOVA (3x2x2) Factorial Experiment for learning style (Individualistic V/s Non individualistic) with varying degree of Ach. Motivation among secondary school students of Non working Mothers .

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	1.40	2.00	0.70	0.33	Insignificant
Ach. Motivation (B)	1.88	1.00	1.88	0.89	Insignificant
Sex (C)	0.01	1.00	0.01	0.00	Insignificant
Intelligence and Achievement motivation(AxB)	1.40	2.00	0.7	0.33	Insignificant
Intelligence and Sex (AxC)	19.47	2.00	9.73	4.63	Significant
Ach. Motivation & Sex (BxC)	0.68	1.00	0.68	0.33	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	21.60	2.00	10.80	5.15	Significant
Within	226.70	108.00	2.10		

Table 2 revealed that there were significant differences in intelligence × sex and intelligence × achievement motivation × sex among secondary school students having learning style (individualistic v/s Non-individualistic).

Table 3: Summary of 3-way ANOVA (3x2x2) Factorial Experiment for learning style(visual V/s Aural) with varying degree of Ach. Motivation among secondary school students of Non working mothers.

Source of Variation	Sum of Squares	Df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	9.12	2.00	4.56	1.47	Insignificant
Ach. Motivation (B)	4.80	1.00	4.80	1.55	Insignificant
Sex (C)	1.63	1.00	1.63	0.53	Insignificant
Intelligence and Achievement motivation(AxB)	2.15	2.00	1.07	0.34	Insignificant
Intelligence and Sex (AxC)	12.52	2.00	6.26	2.02	Significant
Ach. Motivation & Sex (BxC)	0.03	1.00	0.03	0.01	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	36.62	2.00	18.31	5.91	Significant
Within	334.60	108.00	3.10		

Table 3 revealed that there was found cumulative effect of intelligence×sex and Intelligence×achievement motiva-

tion× sex on learning style (visual v/s Aural) among secondary school students belonging to non-working mothers.

Table 4: Summary of 3-way ANOVA (3x2x2) factorial experiment for learning style(Field Independent V/S Field Dependent) with varying degree of achievement motivation among secondary school students belonging to non working mothers.

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	2.87	2.00	1.43	0.56	Insignificant
Ach. Motivation (B)	1.63	1.00	1.63	0.64	Insignificant
Sex (C)	6.53	1.00	6.53	2.55	Significant
Intelligence and Achievement motivation(AxB)	11.47	2.00	5.73	2.24	Significant
Intelligence and Sex (AxC)	20.87	2.00	10.43	4.08	Significant
Ach. Motivation & Sex (BxC)	0.30	1.00	0.30	0.12	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	29.60	2.00	14.80	5.79	Significant
Within	276.20	108.00	2.56		

Table 4 shows that there were significant differences in sex,intelligence× achievement motivation, intelligence×sex and Intelligence×Achievement Motivation × Sex on learning style (field independent v/s field dependent) among secondary school students belonging to non-working mothers.

Table 5: Summary of 3-way ANOVA (3x2x2) factorial experiment for learning style (Short attention span v/s Long attention span) with varying degree of achievement motivation among secondary school students belonging to non working mothers

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	10.62	2.00	5.31	1.93	Insignificant
Ach. Motivation (B)	0.30	1.00	0.30	0.11	Insignificant
Sex (C)	13.33	1.00	13.33	4.84	Significant
Intelligence and Achievement motivation(AxB)	1.05	2.00	0.52	0.19	Insignificant
Intelligence and Sex (AxC)	7.12	2.00	3.56	1.29	Insignificant
Ach. Motivation & Sex (BxC)	1.63	1.00	1.63	0.59	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	5.62	2.00	2.81	1.02	Insignificant
Within	297.80	108.00	2.76		

Table 5 indicated that boys and girls of secondary school were not alike in aforesaid learning style.

Table 6: Summary of 3-Way ANOVA (3x2x2) factorial Experiment for learning style (Motivation-centered V/s Motivation Non-centered) with varying degree of achievement motivation among secondary school students belonging to non working mothers.

Source of Variation	Sum of Squares	df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	4.32	2.00	2.16	0.57	Insignificant
Ach. Motivation (B)	4.80	1.00	4.80	1.28	Insignificant
Sex (C)	2.70	1.00	2.70	0.72	Insignificant
Intelligence and Achievement motivation(AxB)	7.35	2.00	3.67	0.98	Insignificant
Intelligence and Sex (AxC)	0.65	2.00	0.32	0.08	Insignificant
Ach. Motivation & Sex (BxC)	0.00	1.00	0.00	0.00	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	20.15	2.00	10.08	2.68	Significant
Within	406.40	108.00	3.76		

Table 6 indicated that there was found significant cumulative effect of intelligence, achievement motivation and sex on aforesaid learning style.

Table 7: Summary of 3-Way ANOVA (3x2x2) factorial Experiment for learning style (Environment oriented Vs Environment free) with varying degree of achievement motivation among secondary school students belonging to non working mothers.

Source of Variation	Sum of Squares	Df	Mean Squares	F-Ratio	Level of Significance
Intelligence (A)	15.12	2.00	7.56	2.52	Significant
Ach. Motivation (B)	1.41	1.00	1.41	0.47	Insignificant
Sex (C)	0.41	1.00	0.41	0.14	Insignificant
Intelligence and Achievement motivation(AxB)	2.82	2.00	1.41	0.47	Insignificant
Intelligence and Sex (AxC)	26.52	2.00	13.26	4.42	Significant
Ach. Motivation & Sex (BxC)	4.41	1.00	4.41	1.47	Insignificant
Intelligence, Achievement Motivation and Sex (AxBxC)	17.22	2.00	8.61	2.87	Significant
Within	323.90	108.00	3.00		

Table 7 revealed that there were significant differences in intelligence,intelligence×sex and intelligence ×achievement motivation×sex with aforesaid learning style.

Discussion of Results:

Overall results of the study indicated that there was found significant cumulative effect of intelligence, achievement motivation & sex on different sets of learning styles among secondary school students belonging to non-working mothers. The results are in accordance with studies conducted by Bruni et.al,(2006); Deary et.al.(2007) and Tella,(2007).

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