CORRELATIONAL STUDY OF LEARNING STYLES AND SECOND LANGUAGE ACHIEVEMENT AMONG SECONDARY SCHOOL STUDENTS

Dr. Kusum*

Abstract

One of the most significant issues in learning to learn is for individuals to take responsibility for their own learning. When learners take the responsibility of their own learning, they attribute meaning to the process of learning, leading to effective learning. The purpose of this study was to determine the relationship between learning style and achievement in second language among secondary school students in Punjab. The study objectives were to: identify the learning style preference among secondary school students; and to determine the relationship between learning styles and academic achievement of male and female the students. The data collection instrument was the Kolb's on learning styles. This was used to identify the learning style preference among the students based on Visual (V), Auditory (A), Reading (R) and Kinaesthetic (K) modalities. The second language achievement referred to achievement in Hindi language in their academic performance. The findings indicate that majority of the students are multimodal learners, followed by bimodal (VA) learners and thirdly by unimodal (V), learners. The least preferred learning styles are reading and kinaesthetic moddities which were preferred by only 2 female students. There was no significant difference in learning style preference among male and female students and among high and low academic achievement groups. There was strong positive and statistically significant relationship between learning styles and second language achievement for the multimodal learners, and among male and female students.

Introduction

Language Learning has, for the past decades, been the centre of interest in educational research. Exploring the issue of language achievement has extended beyond simple issues of intelligence and prior academic achievement into how learners interact with the learning material. Several factors have been identified in explaining academic achievement: demographic status (Ray, 2010), intelligence (Deary et.al); behavioural characteristics (Lane et.al); and psychological factors such as attributes (Erdogan et.al) self-esteem (Reasoner, 2005) self-efficacy (Olatunde, 2009) and self-concept (Holliday, 2009).

*Assistant Professor, Government College of Education, Chandigarh

A specific attention has been given to Hindi language perhaps due to its wide application in the Punjab. Hindi is a compulsory subject taught in secondary schools. Second Language is an important aspect of life in all beings especially with the rise of globalization where the human race needs a common and identifiable language for communication (Li & Dan, 2006). Many of the courses in higher education also require good performance in Hindi subject since the subject is the medium of instruction and the national official language. For these reasons, achievement in Hindi subject has been and continues to be researched on and understood in light of the aforementioned factors affecting achievement. A number of learning-related concepts, such as perception of academic control and achievement motivation which have been a focus of attention when attempting to identify factors affecting learning-related performance (Cano- Garcia & Hughes, 2000). One concept in particular which has provided some valuable insights into learning in both academic and other educational settings is learning style. Learning style has been defined as a consistent way of functioning that reflects the underlying causes of learning behaviour (Keefe, 1987). Learning style is both a characteristic which indicates how a student learns and likes to learn, as well as instructional strategy informing the cognition, context and content of learning. Previous studies have reported that students 'learning performance could be improved if proper learning style dimensions could be taken into consideration when developing any learning or instructional process (Graf, Liu, & Kinshuk, 2010). There is general acceptance that the manner in which individuals choose to or are inclined to approach a learning situation has an impact on performance and achievement of learning outcomes. Whilst- and perhaps because-learning style has been the focus of such a vast number of research and practitioner- based studies in the area, there exist a variety of definitions, theoretical propositions, models, interpretations and measures of the construct. To some extent, this can be considered a natural consequence of extensive empirical investigation and is to be expected with any continually developing concept which proves useful in gaining understanding of such a crucial and prevailing endeavour as learning.

Review of related research

Kopsovich (2001) conducted a research on the relationship between learning styles of students and their Mathematics scores on the Texas assessment of academic skills test and established that the learning style preferences of all students in the area of persistence significantly impacted their mathematic achievement scores. Gender and ethnicity were mitigating factors in the findings. The Pearson Product Moment Correlation coefficient and the Point-biserial correlation analysis was applied to the data collected from 500 randomly selected fifth grade students attending a North Texas Intermediate school. There was a significant relationship of 0.542 at 0.05 level of significance. Part of the data was the student 's responses to the Learning style inventory by Dunn, Dunn and Price. In summary, the author suggests that supplying the teachers with information concerning students 'learning style preferences will

benefit student achievement.

Rebecca (2003) carried out a research on "Language learning styles and strategies," the author synthesizes research from various parts of the world on two key variables affecting language learning: styles, i.e., the general approaches to learning a language; and strategies, the specific behaviours or thoughts learners use to enhance their language learning. These factors influence the student's ability to learn in a particular instructional framework.

Gan et al. (2004) carried out a qualitative investigation into the attitudes and strategies of nine successful and nine unsuccessful Chinese learners of English as a foreign language. In this study, attitudes towards the learning of the target language rather than specific strategies seemed to differentiate the successful from the unsuccessful learners.

Li Jie& Qin Xiaoqing (2006) in their research focuses on the relationship between learning styles and language learning strategies in the EFL context in China. The analyses show that learning styles have a significant influence on learners' learning strategy choices. There is evidence that the Judging scale correlates positively with seven sets of learning strategies. Thus it turns out to be the most influential learning style variable affecting learners' learning strategy choices. Compared with low achievers, high achievers are more capable of exercising strategies that are associated with their non-preferred styles.

Warn (2009) conducted a research to determine if there is any difference in the students' learning style for subjects with different assessment orientation (theoretical versus computational) and if there is any association between students' learning style and their academic performance in two final year subjects, with and without controlling for their previous academic achievement. Kolb's (1976) Learning Style Inventory (LSI) was used to gauge the learning style of the final year accounting students of an institute of higher learning. He found that there was a difference between learning style for subjects with different assessment orientation. He also found that there was no significant association between the students' learning style and their academic performance, with or without controlling for their previous academic achievement.

Habibah Elias (2010) investigated the impact of learning styles on the academic achievement of secondary school students. The Kolb Learning Style Inventory (1999) was administered in eight public schools in Tehran. The mean of test scores in five subjects, namely English, science, mathematics, history and geography, was calculated for each student and used as a measure of academic achievement. The results of the analyses of variance showed that there was a statistically significant difference in the academic achievement of the students that correspond to the four learning styles.

Rozalina Khalid (2013) verified the statement that learning styles influence the academic achievements of students' in the arts and science streams. The Pearson Correlation analysis showed no significant relationship between learning styles as a whole with academic achievements, except for avoidance. The main findings also showed no significant relationship

between learning styles and academic achievements.

Objectives

1. To identify the learning style preferences among students.
2. To determine the learning styles on the basis of gender.
2. To determine the achievement levels of students in Hindi Language with different learning styles.
3. To determine the relationship between learning style preference and achievement in Hindi language on basis of gender.

Hypotheses

1. There is no significant difference in learning styles preferences of male and female students.
2. There is no significant difference in academic achievement between male and female students.
3. There is no significant correlation between learning style preference and achievement of male and female students in Hindi language.

Design of the study

Descriptive survey method of research was used.

Sample of the study

The sample of study consisted of 150 secondary students of Govt. Secondary School of Chandigarh studying in class IX and X.

	IX	X
Female	45	50
Male	25	30

Tools used

1. VARK online Questionnaire by Kolb was used to determine the learning styles of the students (2017).
2. Achievement in Hindi was taken from the marks obtained by students in final exams at secondary level.

Statistical teachinques

The statistical techniques used in this study were percentage and Pearson Product Moment Correlation coefficient and calculated relationship between learning style and the average scores in Hindi.

Results and discuttion

Table-1: Overall Learning Style Preference among the Students

	Visual	Auditory	Reading	Kinaesthetic	VA	AR	RK	KV	KA	VR	VARK
N	15	3	1	1	45	9	1	8	4	4	59
%	10.6	2.0	0.8	0.6	30.0	6.2	0.5	5.0	2.7	2.0	39.6

Graphical Representation of Overall Learning Style Preference among the Students

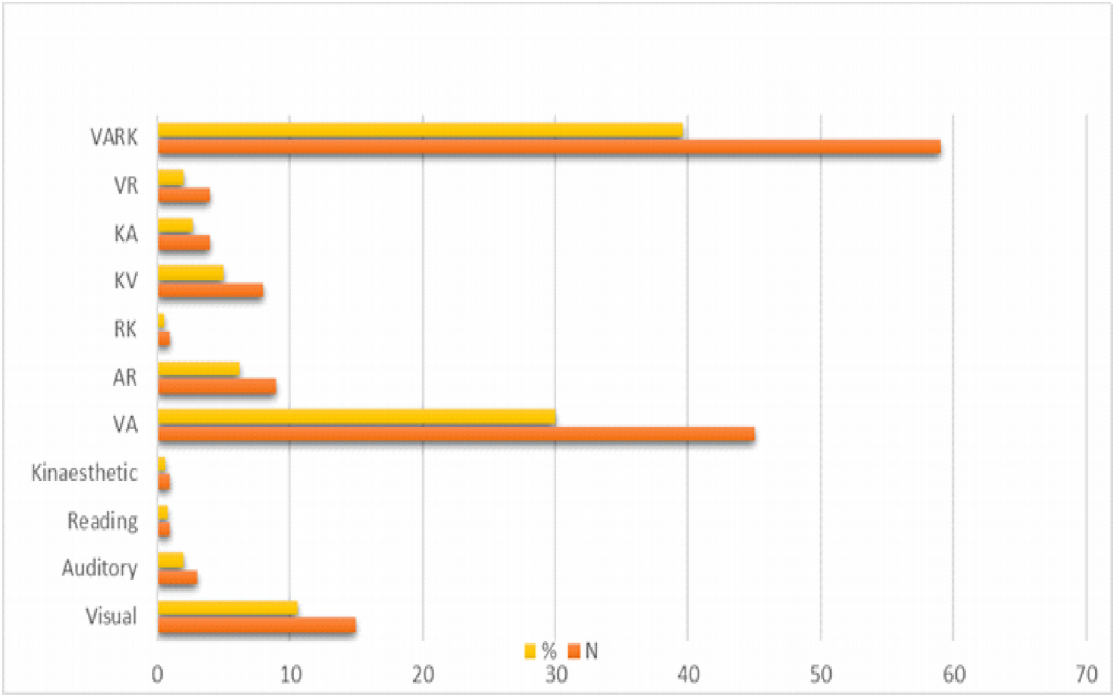


Table-2: Learning Style Preference on the basis of gender

	Male		Female	
	N	%	N	%
Visual	7	4.6	8	5.3
Auditory	2	1.3	1	0.7
Reading	00	0	1	0.7
Kinaesthetic	00	0	1	6.6
VA	23	15.3	22	14.7
AR	04	2.7	05	3.3
RK	00	0	02	1.3
KV	3	2	5	3.3
KA	3	2	1	0.7
VR	2	2	2	2
VARK	30	20.3	29	19.3

Graphical Representation Learning Style Preference on the basis of gender

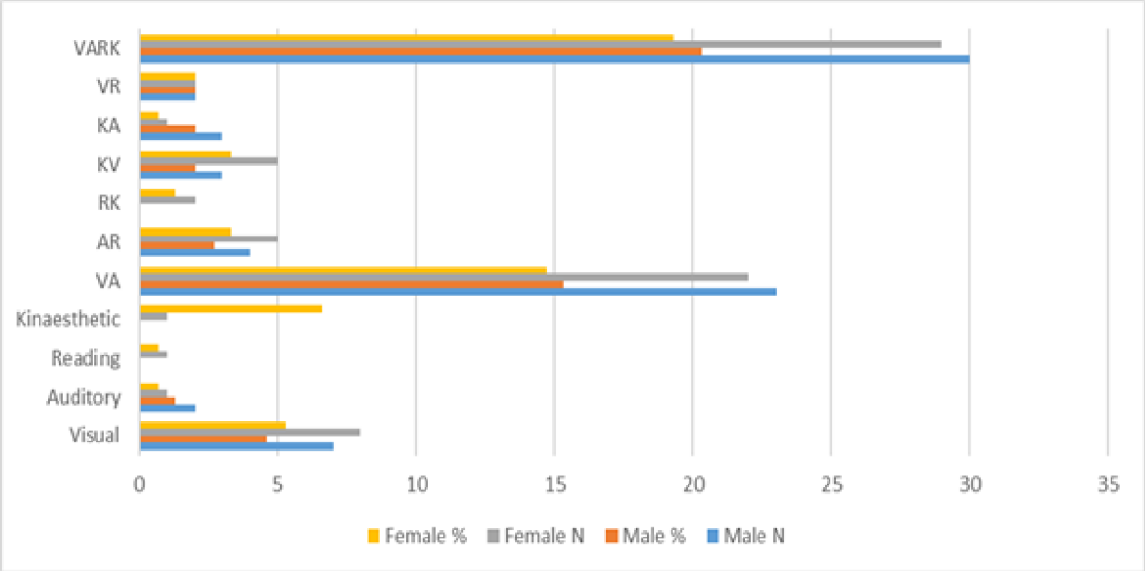


Table-3: Achievement levels of students in Hindi Language with different Learning Styles

	High Achievers		Low Achiever	
	N	%	N	%
Visual	11	7.3	4	2.6
Auditory	0	0	3	02
Reading	0.7	0	0	0
Kinaesthetic	00	0	1	6.67
VA	30	20	15	10
AR	07	4.7	02	1.3
RK	00	0	02	1.3
KV	0	0	8	5.3
KA	0	1.3	4	2.7
VR	1	6.67	3	2
VARK	39	26.3	20	13.3

Graphical Representation of Achievement levels of students in Hindi Language with different Learning Styles

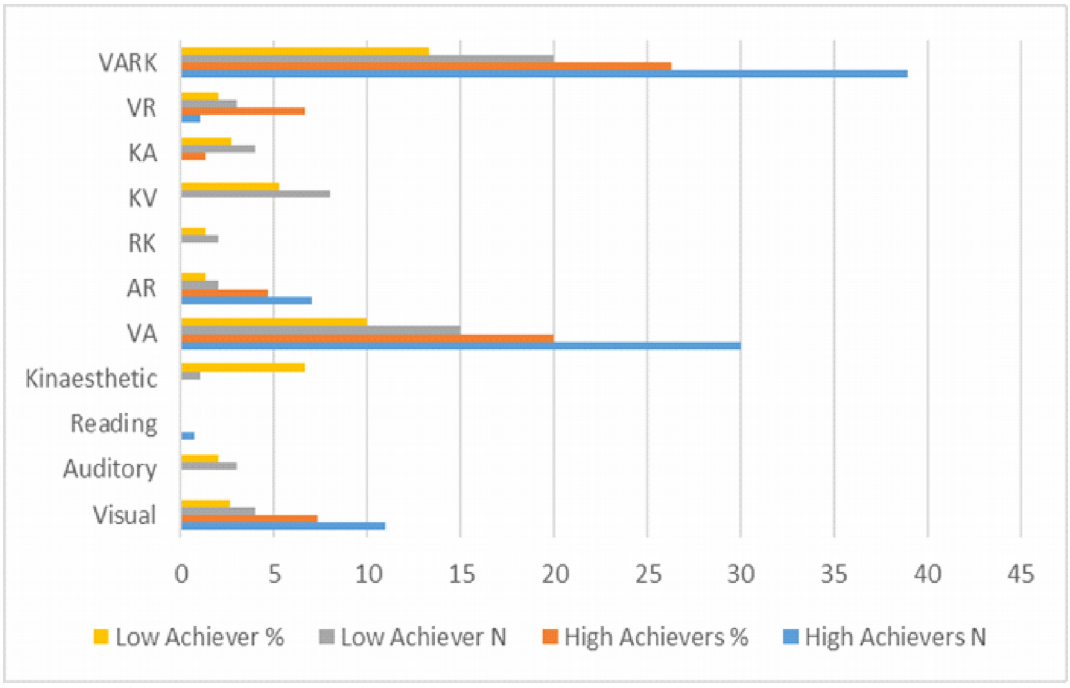


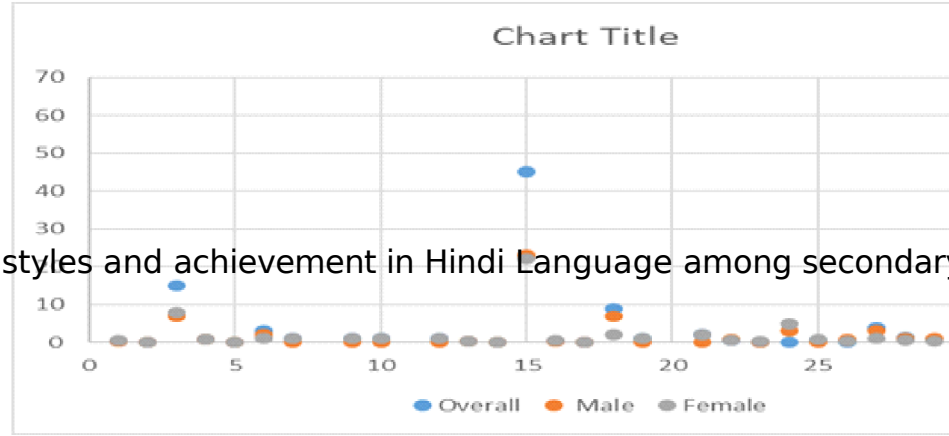
Table-4: Correlation between learning style preference and achievement in Hindi Language

		Overall	Male	Female	Significance
Visual	Pearson Correlation	.396	.373	.509	Correlation is significant at the 0.01 level (2-tailed)
	Sig. (2-tailed)	.033	.155	.076	
	N	15	7	8	
Auditory	Pearson Correlation	.777	.917	.843	Correlation is significant at the 0.01 level (2-tailed
	Sig. (2-tailed)	.023	.083	.157	
	N	3	2	1	
Reading	Pearson Correlation	1.000	.b	1.000	Correlation is significant at the 0.05 level (2-tailed
	Sig. (2-tailed)				
	N	1	0	1	
Kinaesthetic	Pearson Correlation	1.000	b*	1.000	Correlation is significant at the 0.05level (2-tailed
	Sig. (2-tailed)				
	N	1	0	1	
VA	Pearson Correlation	.246	.225	.267	Correlation is significant at the 0.01 level (2-tailed
	Sig. (2-tailed)	.014	.115	.064	
	N	45	23	22	
AR	Pearson Correlation	.396	.373	.509	Correlation is significant at the 0.01 level (2-tailed
	Sig. (2-tailed)	.033	.155	.076	
	N	9	7	2	
RK	Pearson Correlation	1.000	b*	1.000	Correlation is significant at the 0.01 level
	Sig. (2-				

KV	Pearson Correlation	.666	.775	.541
	Sig. (2-tailed)	.002	.002	.268
	N	0	3	5
KA	Pearson Correlation	.462	.147	.895
	Sig. (2-tailed)	.178	.753	.294
	N	4	3	1
VR	Pearson Correlation	1.3	1.000	.666
	Sig. (2-tailed)	.777	1.000	.238
	N	4	2	2
VARK	Pearson Correlation	.738	.754	.743
	Sig. (2-tailed)	.000	.000	.000
	N	59	30	29

b* too small to be computed

Scatter diagram of Correlation between learning style preference and achievement in Hindi Language on basis of gender.



CONCLUSION

This correlation study between learning styles and achievement in Hindi Language among secondary

1. Several learning style preferences dimensions were identified in this study: Multimodal learners prefer Visual/Auditory/Reading/Kinaesthetic (VARK) dimensions; bimodal, those who prefer Visual/Auditory (VA), Visual/Kinaesthetic (VK) and Auditory/Kinaesthetic (AK); and unimodal, preferring single learning style dimension Visual (V), Auditory (A) and Kinaesthetic (K).

2. Majority (39.6%) of the secondary school students are multimodal learners (having preferences for visual, auditory, reading style and kinaesthetic learning style modals), followed by the bimodal learners preferring visual and auditory learning styles with (30%) and unimodal learners preferring only visual learning style dimension. The least preferred learning style are reading and kinaesthetic learning style dimension which had a preference of 0.6% among the secondary school students.

3. The relationship among the multimodal (VARK) male and female learners is significant at 0.05 level. This shows that there is a positive relationship between learning style preference and achievement in Hindi language of male and female students.

Educational Implications

The present study yielded some important insights into learning style preferences among secondary school students and the following recommendations are made:

1. Teachers/instructors need to take into account their students' diverse learning styles, design instructional methods that take care of those diversities and remain sensitive of such during the instruction process.

2. Teachers should also help their students to understand their learning style preferences and make use of such to develop life-long learners.

3. School administrators need to provide various learning materials which can bring diversity in the classroom by employing visual, auditory, reading and kinaesthetic materials such as use of technology and students project writing and presentation among other methods.

References

Gan et al., (2004) Understanding successful and unsuccessful EFL students in Chinese UniversitiesThe Modern Language.

Habibah, E. (2010). Academic Achievement of Students with Different Learning Styles. University Putra Malaysia, Malaysia :

Holliday, A. (2009). Understanding the Implications of Self-concept and Academic Self-Concept has on African Americans and Latinos.

Kopsovich, R. D. (2001). A study of correlations between learning styles of students and their *Mathematics scores on the Texas assessment of academic skills test*.North Texas, US: Unpublished doctoral dissertation, University of North Texas.

Kolb, D. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice-Hall. ISBN0-13-295261-0.

Kolb, D.A. (1985). Learning Styles Inventory. Boston: McBeer and Co.

Li Jie& Qin Xiaoqing (2006) Language Learning Styles and Learning Strategies of Tertiary Level English Learners in China SAGE Publications (London, Thousand Oaks CA and New Delhi).

Olatunde, P. (2009). Students Attitude Towards Mathematics and Academic Achievement in Some Selected Secondary Schools in South-western Nigeria. European Journal of scientific Research, 36(3): 336-341.

Rebecca L.(2003).Language learning styles and strategies:An overviewLearning Styles & Strategies/Oxford, GALA 2003.

Ray, B. D. (2010). Academic Achievement and Demographic Traits of Home-school Students: ANationwide Study in Academic Leadership. The Tiurkish Online Journal, 8(1).

Reasoner, R. (2005). The true meaning of self-esteem. Retrieved November 4th from International Council for Self-esteem.

Roza, L. (2005). Employing multiple solution tasks for the development of mathematical creativity: two comparative studies. Ph. D. Education,Thesis, H.P.U., Shimla.

Warn, T. S. (2009). Students' learning style and their academic achievement for taxation course - A comparison study. Proceedings of the 2nd International Conference of Teaching and Learning. INTI University College, Malaysia.