CHAPTER:II REVIEW OF RELATED LITERATURE

Chapter II

REVIEW OF RELATED LITERATURE

2.1 Introduction

In the first chapter, researcher presented with an introduction to the problem, stated the problem and brought out the rationale of the problem. Further researcher formulated objectiveness of the study and also framed research questions that guided the research work. At the end, the researcher has mentioned limitation of the study.

In the present chapter, researcher will be dealing with the review of related literature, research takes advantage of the knowledge which has accumulated in past as a result of constant human endeavour. It can never be undertaken in isolation of the work that has already been done on the problem which is directly or indirectly related to study proposed by a researcher. A careful review of research journal, books, dissertation, thesis and other sources of information on the problem to be investigated is one of the important steps in the planning of any research study. A review of related literature must precede any well planned research study. It helps us to know about the research gaps. Good, Barr and Scates (1972), pointed out that reviewing assist in avoiding the risk of duplication, identifying appropriate research methods, searching theories, explanation and hypothesis, valuable in formation of research design, locating data for making comparison and interpretation having a vision of totality of fixed to be investigator.

2.2 Purpose of the review

Review of the related literature besides allowing the researcher to acquaint himself with current knowledge in the field or area in which he/she is going to conduct his research, serves the following specific purpose

1. The review of related literature enables the researcher to define the limits of his field.

2. By reviewing the related literature, the researcher can avoid unfruitful and useless problem area.

3. By reviewing related literature, the researcher can avoid unintentional duplication of well established findings.

4. The review of related literature gives the researcher an understanding of the research methodology which refers to the way the study is to be conducted.

5. The advantage of reviewing the related literature is to be providing insight into the statistical through which validity of results to be established.

6. The final and important specific reason for reviewing the related literature is to know about the recommendation of previous researchers listed in their studies for further research.

Thus, the literature in any field forms the foundation upon which all future work must be build. If we fail to built this foundation of knowledge provided by the review of literature, our work is likely to be shallow and will often duplicate work, that have already been done better by someone else. The insight and knowledge gained by the review inevitably lead to a better designed project and greatly improve the chances of obtaining important and sufficient result.

2.3 Review of related literature

In this chapter, the researcher attempts to review literature that has been generated elsewhere on two themes i.e., "attitude towards mathematics" and "perceived career choice". From the past many years, research on attitude towards mathematics and perceived career choice has been conducted and it is seen that in spite of.

The review of related literature is an essential backbone of research. A review chapter needs to be organized systematically. It can be follow different models depending upon the kind of study. In fact, the review of related literature and research work of a particular area has to be as broad based as possible and it may focus on the case issues of research, surrounded by peripheral concerns.

A good review work is one where the researcher is logically presenting a particular set of theory supported with empirical evidences which in turn is unfolding itself effortlessly. This may follow a narration style, an analytical style, a descriptive style or an interpretative style differently at different place of review.

2.4 Review related to attitude towards mathematics

Krishnaveni, A.R. A. (2014), studied "An Essential Elements of Developing Soft Skills in Learning Mathematics"

Objectives of the study were:

To find out significant difference if any in the attitude of XI standard students towards learning mathematics and its dimensions like self-confidence, value, motivation and enjoyment with reference to the variable gender, type of family, domicile and type of institution. Sample was 150 students studying XI standard in Rajapalayam.

Results of the study were:

1. There is significant difference in attitude self-confidence in terms of type of family.
2. There is significant difference in the attitude value of higher school students in terms of gender.
3. There is significant difference in attitude- self confidence, value, enjoyment and attitude in total in terms of type of institution.

4. There is no significant difference among XI standard students in attitude of motivation towards learning mathematics.

5. There is significant difference is found among XI standard students in enjoyment with respect to domicile.

Maria de lourdo mata,Vero Monteiro, Francisco Peixoto (2012) had did a study on "Attitudes towards Mathematics: Effects of Individual, Motivational, and Social Support Factors" on 1719 Portuguese of fifth to twelfth grade students.

Objectives of their study were:

1. To study effect of inter-related variables such as motivation, background and social-support on leading the attitude towards mathematics.
2. To study an understanding the characteristics of this attitude in school environment.
3. To study gender effect on attitude towards mathematics.
4. To study students perception towards their teachers and peer support.

Findings of the study were:

1. In general students held positive attitude towards mathematics.
2. No gender effect found on attitude towards mathematics.
3. Motivational-related variable play a significant role in attitude towards mathematics, teachers, social-support and peer support.

Choudhary. E. (KKK), (2002-03), had done a study on "A Study of Classroom Environment, Achievement Motivation and Attitude towards Mathematics".

Objectives of the study were:

1. To compare the different categories of classroom environment in respect of attitude towards mathematics and achievement motivation.

2. To compare the different categories of attitude towards mathematics in respect of classroom environment and achievement motivation.

3. To compare the different categories of achievement motivation in respect of classroom environment and attitude towards mathematics.

4. To study the different of classroom environment, attitude towards mathematics and achievement motivation of the students of urban area nd rural area.

5. To find out interrelationship between classroom environment, achievement motivation and attitude towards mathematics.

Findings of the study were:

1. There is a big difference of classroom environment, achievement motivation and attitude towards mathematics.

2. Relationship among the variables classroom environment, achievement motivation and attitude towards mathematics of students belonging to different types of school.

3. Composition of classroom environment, achievement motivation and attitude towards mathematics locality wise.

Mohamed, L. & Waheed, H. (2011) conducted a study on "Secondary Students Attitude towards Mathematics in a Selected School of Maldives"

Purpose

Purpose of his study was to find out the students' attitude towards mathematics and find out gender difference in attitude towards mathematics in selected school of Maldives.

Results

The results show that the students' positive attitude towards mathematics is medium and there is no gender difference in their attitude towards mathematics.

Leticia, E. & Garduno, H. (2015) had conducted a study on "The Influence of Cooperative Problem Solving on Gender Differences in Achievement, Self-Efficacy, and Attitude towards Mathematics Gifted Students".

Purpose

The purpose of this study was to investigate gender difference in self–efficacy, attitude towards mathematics and achievement 40 gifted, seventh and eighth grade students. To measure the females' achievement, attitude towards mathematics and self-efficacy in mathematics.

Conclusion

Results of this study, indicates the female students in the cooperative, mixed gender group had better attitude towards mathematics in the end of the course.

Nicolaidou, M. & Philippou, G. had conducted a study on "Attitude towards Mathematics, Self-Efficacy and Achievement in problem- solving".

Purpose

The aim of the study was to explore relationship between students' attitude towards mathematics, self-efficacy beliefs on problem-solving and achievement.

Conclusion

The analysis of the data revealed that a high proportion of students hold positive attitude towards mathematics. There is a significant relationship of gender and attitude towards mathematics.

Hannula, M. (2002) conducted a study on "Attitude towards mathematics: emotions, expectation and value"

Purpose

This paper will develop a new framework for analysing attitude. A foundation will be built from the background of psychology of emotion. The observable category 'students' attitude towards mathematics' will be separated into four different evaluative processes: 1) the emotions that students experience during mathematics related activities, 2) the emotions that the students automatically associates with the concept mathematics, 3) evaluation of situation that the students expects to follow as a consequences of doing mathematics and 4) the value of mathematics relate goals in the student's global goal structure.

Conclusion

There are three conclusions. The most important conclusion is that the proposed framework of emotions, association, expectations and value is useful in describing attitude and their changes in detail. The second conclusion is that attitude sometimes can change automatically in relatively short times. Thirdly, the negative attitude towards mathematics can be a successful defence strategy of a positive self concept. Finally, we shall deserve the trustworthiness of the presented interpretations and some implications.

Farooq, M. S. & Shah, S. Z. (2008) had conducted a study on "Students' Attitude towards Mathematics".

Objectives

1. To study effect of gender on students' attitude towards mathematics at secondary school level.
2. To study the confidence of male and female students towards mathematics at secondary school level.
3. To study male and female students about the usefulness of mathematics at secondary school level.

4. To study the differences in male and female students about the mathematics as male domain at secondary school level.

5. To study difference in opinion of male and female students about the mathematics teacher perception at secondary school level.

Conclusion

The results of this study lead us to an important conclusion. The male and female students of 10^{th} grade of the secondary schools of Lahore have same type of attitude towards mathematics. It means that gender differential has no impact on the attitude of students towards mathematics in Pakistan.

Mahanta, S. & Islam, M. had conducted a study on "Attitude of Secondary Students towards Mathematics and its Relationship to Achievement in Mathematics".

Objectives

1. To study gender wise differences in students' attitude towards mathematics.

2. To study is there any relationship between attitude towards mathematics and achievement of a student.

Conclusion

It can be concluded that boys show more positive attitude towards mathematics than girls. Also attitude of students and achievement positively correlated.

2.5 Studies related to career choice

Itama Gati and Maya Perez (2014), studied "Gender difference in career preferences from 1990 to 2010: gaps reduce but not eliminated"

Results

Result of the study was, in four facet gender difference involved in career decision making: (a) gender difference in career preferences in 2010, (b) changes in gender differences from the 1990 to the 2010 cohort, (c) gender difference in the structures of aspects preferences in 1990 and 2010, and (d) gender differences in changes in career preferences from the 1990 to the 2010 cohort.

Gdeon Arulmani (2004) conducted a study on "Career planning orientations of disadvantaged high school boys: a study of socioeconomic and social cognitive variables" the present study was conducted in India and examined the impact of socioeconomic factors and the variables of self-efficacy and career beliefs on the career planning orientation of 755 high school boys from disadvantaged backgrounds. The sample had four orientations to career planning, namely, the intention to begin working immediately, pursue college education, and enter vocational training and no career plans. The children of illiterate and unemployed parents exhibited the highest tendency to prematurely discontinue education and the world of work as unskilled labourers. A significant effect of parent employment on self-efficacy was found, indicating that respondents whose parents had full time employment had higher self efficacy score than those whose parents were unemployed. It was also found that the children of illiterate and unemployed parents had a higher level of negative beliefs about career preparation. This study also presents information regarding the translation of exiting measure of socioeconomic status and self-efficacy into kannada, a South Indian language and preliminary information about the construction of a scale to measure career belief distortions among high school students.

Dr. Shanti Pramod (2005) conducted a study on "Sec difference on future time perspective cognitive efficiency academic performance and Anxiety among Eleventh standard students." The present research was carried on 300, 11^{th} std. boys & girls in Tamilnadu with a view to find whether sec difference exists in the variables future time perspective cognitive efficiency, academic performance and anxiety, Data were collected unit john's. Future time perspective test (1981),

Wechseer's adult intelligence scale and spilbenger's state and trait anxiety questionnaire significant in future time perspective, cognitive efficiency, academic percentage & state and trait anxiety.

Dr. S. Sndararagan, (2005) conducted at study on "Occupational Preferences of the higher secondary students in Tamil Nadu". This study is intended to find out (i) the most preferred occupation from the list of occupations listed, by the various categories of higher secondary students and (ii) If there is any association between the categories of students the occupation they prefer most. It is found that teaching gets the maximum preference (first) by women students, students of Humanities group. (Arts) students whose parents are educated but not graduates and by students who parents and farmer. In the same the occupation of Doctors gets the first preferences and it is give science students whose parents are graduates and students whose parents are either Teaches or Doctors. In respect of the occupation of engineering, the first preference is given by men students, students whose parents are engineer. The sex of the students, the subject they offer & their parents' occupation seem to be associated with their occupation not preference.

Gideon Arulmani & Simon Easton (2005) conducted a study on "The Influence of Career Beliefs and Socio-Economic Status on the Career Decision-Making of High School Students I India". This paper responds to current discussions in career psychology that emphasize the importance of understanding how socio-economic backgrounds and social-cognitive environments influence career development. Located in India, this study examines the interaction between career beliefs and socio-economic status within a sample of Indian high school students. Significant socio-economic status differences were observed, with the lower SES groups showing higher levels of negative career beliefs. The relevance of these findings to career psychologists who work in multi cultural contexts is discussed within the framework of the Social Cognitive Theories of Career Decision Making.

Yunker & Jonel Jones (2003) conducted on a study on "The relationship between self esteem and traditionality of career choice among eighth grade girls". This study of eighth girls was designs to address the relationship between the level of self-esteem and the gender traditionality of their likely and ideal career choices. In additional, this study explored the degree of the similarity between a girl's likely choice and her ideal choice of career. One hundred and twenty nine participants were recruited from two junior high schools in Greater Cincinnati Area. Participants completed the Rosenberg self-esteem inventory as well as questions asking each girl for her likely career choice and her ideal choice career choices were dichotomously rated as traditionally on non traditionally. About half the sample named the same career as their likely and their ideal choice. Sixty three percent scored as only high in self esteem (9 or 10 out of 10 possible points). In a t-test of Equality of means for concerns the girls expected to enter the average self-esteem scores fir girls choosing traditional career was not significantly lower than for girls choosing non-traditional career. In a t-test of equality of Means for ideal choice, average self-esteem scores for girls with non traditional choice were also not significantly different from the average self esteem scores for girls with traditional ideal choices. In a chi square test compassing traditional and non traditional career choices again there was no statistical significant difference in distribution.

Quantitative analysis did not support the hypothesis that there is a statistically significant positive correlation between self-esteem and career choice among middle school girls therefore more research needs to be done to ascertain other variable that influence traditionality of career choice.

2.6 Studies related to attitude towards mathematics and career choices

Patricia, B. E. (1985) had conducted a study on "A Longitudinal Study of Career Interests and Mathematics Attitudes for Students at the Eighth and Twelfth Grade Levels."

Purpose

The objective of the present research was to investigate the relationship between attitudes toward mathematics, career interests, and parent variables measured at grade eight and attitudes toward mathematics and career interests as measured at grade twelve.

Result

The relationship between career interests and student attitudes toward mathematics as exhibited by the canonical correlations identify interest in the career areas of Natural, Social, and Medical Science; Social, Health, and Personal Services; Business Sales and Management; and, Business Operations as being significantly correlated with positive attitudes toward mathematics.

2.7 Recent years studies on attitude

Yadav. Renu (2011) conducted a survey on "A study of level of environmental attitude of secondary school students".

Objectives:

1. To study the level of environmental attitude of secondary school urban and rural students.
2. To study the level of environmental attitude of secondary school urban boys and rural boys students.
3. To study the level of environmental attitude of secondary school urban girls and rural girls students.
4. To study the level of environmental attitude of secondary school urban boys and rural girl students.
5. To study the level of environmental attitude of secondary school urban girls and rural girl students.

Result:

1. There is significant difference in the environmental attitude of rural and urban students.

2. Urban students have more environmental attitude than rural students.

3. Urban boys have better environmental attitude than girls.

4. Urban students have more awareness compared to rural students.

Sudhakaran. M.V. (2014) did a survey on "Attitude towards examinations among students appearing for public examinations"

Objectives of the study were:

1. To develop an exclusive questionnaire exclusively will be developed to measure the attitude towards examination of students appearing for their board examination.

2. To assess and compare the level of attitude towards examination of students will vary with respect to select demographic variables.

3. To find out its relationship to academic performance.

Conclusion:

This study concluded that the female students do have more positive attitude towards examination than male students. The attitude towards examination between the nuclear and joint family students is similar. The level of attitude towards examination among the students from different religious namely Hindu, Christian and Muslims are similar. Attitude towards examination among the students is related to academic performance.

Dange. Jagannath. K. and Nagaraja. H.S. (2012), studies "Attitude of students towards professional ethics"

Objectives of the study:

1. To measure the level of secondary school teacher's professional ethics.
2. To study the difference between professional ethics of male and female teachers
3. To study the difference between professional ethics of government and aided school teachers.
4. To study the difference between professional ethics aided and unaided school teachers
5. To study the difference between professional ethics of government and unaided school teachers.

Conclusions:

This study concluded that professional ethics is more among the teachers of aided schools, where as it is found less among the teachers of government and unaided educational institutions. The female teacher's professional ethics is higher than male teachers and the biology subject teachers' professional ethics is higher than mathematics subject teachers.

2.8 Conclusion of the review of literature

By studying the above research studies it gets clear that there are many researches which have been conducted to see the relationship between Attitude towards Mathematics and Academic Achievement of the students. There are many researches which have been conducted to investigate the Attitude towards Mathematics. Hence above mentioned researches act as a base for the present study. All the researches which had been conducted in the field of Attitude towards Mathematics had shown the positive effect of Attitude towards Mathematics on the academic achievement of the students. There are few researches which have been conducted to see the relationship between Attitude towards Mathematics and perceived Career Choice. The gap which I had found after the review of these studies that very few studies were conducted in high

school level therefore I had decided to see the relationship between Attitude towards Mathematics and perceived Career Choice of students of class 9^{th}. The present study presumes that the outcomes of the research study would through light on significance of the relationship that may exist between Attitude towards Mathematics and perceived Career Choice.