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A COMPARATIVE STUDY OF WRITTEN COMMUNICATION SKILLS OF 8TH GRADE STUDENTS OF PUBLIC, PRIVATE AND MISSIONARY SCHOOLS

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ABSTRACT

In this research paper, writing skills of students in Public, Private and Missionary schools have been compared as these three categories of schools are hypothesized to have different approach to communication skills especially written form. A sample of 60 students from 8th grade, comprising of 20 students from each category of school, participated in this study. Equal ratio of boys and girls was chosen while the site of the research was the city of Lahore. Specialized rubrics were used to assess the written communication skills of the participants and to score the written data collected from the sample. Research method that was used in obtaining data was a “test” of creative writing in which students were asked to write an essay. Results revealed that the writing skills of students of Missionary schools were better than Private schools and Public schools. In some aspects of written communication, students of Private schools and Missionary schools did not differ much but overall, students of Missionary schools were far better in performance than other schools. The higher score of missionary school students implicate that the private and public schools must also employ the teaching methodologies adopted by missionary schools in order to equip their students better in written communication.

KEYWORDS: Written Communication, 8th Grade, Missionary school, Private school, Public School

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INTRODUCTION

In order to determine the proficiency level, writing skills play a major role. To master a language, writing skill is as important as speaking and listening. Writing can be of many types. Some of the types are creative writing, persuasive writing, scientific writing and expository writing. Amongst all these, the focus of the current research is the creative writing of the learners. It is generally observed that the writing skills of Missionary schools differ from Private schools and Public schools so there is a significant difference of English language proficiency level in written communication skills among the students of Missionary schools, Private schools and Public schools. There are a lot of reasons for this difference because Missionary schools arrange special teacher training sessions for their teachers but not the Private and Public schools, so teachers of Missionary schools teach according to the new methodology in a better way (McLaughlin & Talbert, 2001). Writing is generally used as a medium of communication used by humans. Writing comprises of many elements like grammar, semantics and vocabulary. Text is the result of writing. Writing is instrumental in securing the history of anything. Writing styles can be taught to students to improve their skills regarding writing. Choice of appropriate words along with the correct order improves the skills. For good writing, the writing must adhere to the conventions of sentence structure, paragraphs, and use of punctuation marks, correct spellings and proper organization. (Hourani, 2008)

Better the writing style, better the opportunities the students will receive to polish themselves. In order to be a good writer, one must practice writing skills. As it is said that practice makes a man perfect so doing drills and exercises are beneficial for students to perform in a better way. Writing is an art and that art could be made glossy by hard work and implementation. Greater the focus, greater would be the output. Writing makes a career lustrous. Writing is used as an aid to language learning, and if the reader forgets that how he started the sentence he could look back to the start in order to seek help. It has been generally observed that students' proficiency in written communication skills is better in private and missionary schools rather than public schools due to various reasons. This study will try to explore this myth by comparing the written communication skills of grade 8 students in Public, Private and Missionary schools. The objectives of the study are to determine English language proficiency level in written communication skills of students in Public schools, Private schools and Missionary schools, to compare English language proficiency level in written communication

skills of students in Public schools, Private schools and Missionary schools and to give suggestions to teachers to improve their English language proficiency level in written communication skills.

LITERATURE REVIEW

Language is an easy way of communication and collection of sounds by which feelings, thoughts and sentiments are conveyed to human beings (Hadley, 2000). We can observe that with the increasing demand of English in our society and environment, English has been taken a step forward towards success and a lot of opportunities are being created in the field of English. Society is in demand of this subject. It is mere people who give importance to a certain subject or thing or polish a phenomenon. It highly demands the attention and interest of people who let you do the work and raise the importance of a specific thing. It is assumed that utilizing multiple types of composing skills fundamentally backed powerful person (Hand. Hoenshell, Prain, 2007). Unequivocal direction book for science composing might have been exceptionally successful also to moving forward the students' Taking in methodology and accomplishment over science. This has a tendency on help those considerations that the ability and numeracy secretariat may be providing for will verifiable composing.

Equally, there may be a strong relationship between writing frequency and intellectual capacities. (Gay, 2002) contended that organizational, critical thinking, logic and reasoning skills are fostered in writing exercises and these skills tend to pour over into other areas of problem solving or creativity. Writing has also been linked with critical thinking, particularly journal writing has been associated with promoting students' critical thinking and learning skills and writing is in need of practice. To correct the mistakes, it is suggested that write and rewrite the thing until it becomes flawless or the mistakes are removed. In the present world, writing is an important key to success. Writing is a way of communication and communication should be strong enough to convey the meaning. At scale, writing is known as leadership. Writing is basically a way to learn. Writing is a way to call your brain to get up and explore on the paper what's sounding in the head.

Most of the “private school versus government school” research deals with private schools that are devoid of essential characteristics (Merrifield, 2008), and some deals with government schools that face the genuine hitch of choosing a large school. Difficulties rise up, however, in the checking of what comprises of adequate certificate of misspecification of model

to warn the exclusion of a study. The level of performance depends upon the family background and the educational status of peers and elders too. When the opportunities are provided in best way, student is moved and started learning the things more efficiently and keenly observes all what is happening around him. He pays ear to the lectures delivered in the classroom and the environment is comfortable and suitable for learning, there are more chances of learning. Facilities provided by the institute and the parents play role in learning. When the student is free of anxieties and worries, he can learn well. The environment matters in learning. Learning environment is provided by the Catholic schools as compared to the government schools so the students studying in Catholic schools learn in a better way than those of government schools. . They are committed to bring out the best values and skills in their students. They have an amazing scale of educating the students who are in minority. Catholic schools helps person to accept challenge and to make future and the next day better than the previous one. They emphasise all students to participate in each activity. The high grades of the college represents that the students who studied in Catholic schools are more self-motivated.

Cobbold (2014) studied that it is the higher socioeconomic status of the private school students that helps them in achieving high grades in education and it's not about the school that they have attended. Socioeconomic rank matters a lot when defining the academic results of the student. The selection of the school is always done by keeping in view the financial status of the family by parents. Students of the private schools belong to rich families mostly and the public school students cannot afford the expense of Private schools provide a better room for learning depending upon the facilities provided by the school. Political scientists (Chubb and Moe, 1990) found evidence that the private school advantage was a function of less bureaucratic phenomenon and the greater part of being political. Limited English Proficient (LEP). 11 percent students studying in public schools in grade 4 were regarded as LEP and only 4 percent in private schools. Individualized Education Program (IEP), fourteen percent of the public school 4th graders were said to have an IEP, while only 4 percent of 4th grade students in private schools had one. In 8th grade, the percentages were 14 for public schools and 3 for the private ones.

One other recent study has made use of longitudinal data that can address these issues. In a 2005 study, the National Association of Independent Schools (NAIS) compared public and private. High schools using data from the National Educational Longitudinal Study of 1988-2000. NELS includes data not only on student achievement in high school, but also on educational outcomes

after college, including civic-mindedness, job satisfaction, and educational attainment. The NAIS study found that the average private school student outperformed public school students on all of these measures.

Writing could be divided into some sub-skills, for example expository and narrative writing skills (Wilcox, 2002) while writing style is naturally affected by the position or rank of the writer's age, experience and basic profession. Elmaksoud (2014) arranged sub-skills of writing as descriptive skill (description of people, things and places), narrative skill (narrating incidents, stories, events with right sequence and in order), expository skill (writing with aim to justify things). Students should focus on the construction of sentences by using correct grammatical structure and not merely the spellings. Now at this stage, the person who is learning should view words as the body of grammar and to focus on the changes required in construction of sentences. The meaning is just to create a sentence that is correct grammar wise and the reader should understand it easily. In real life, tasks of communicative writing are to write letter, filling a form, report writing etc. These writing skills are not generally practiced in the language class.

Shaheen (2008) concluded that most of the government school teachers behave in a good manner and they avoid using language that is bad for students and disturb the environment of classroom. They were not found to blame other persons of society but when considered the private schools, the ratio is more over there as they are in a sense of competition and try to lead always. The teachers of private schools were found to blame the other persons of the society as well as disturbing the class with the use of poor language.

Iqbal (2006) claimed in a comparative study that teachers in English medium schools use more than one teaching methodologies, English medium schools provide more instructional material for teaching, heavy small class size, arrange more co-curricular activities, art and science exhibition as compared to Urdu medium schools which are mostly public schools. majority of parents and teachers of different qualifications, different age groups, different genders and different schools response that staff morale scale is same but they also reported that staff morale of private teachers is higher than that of government teachers. It was found that teachers of both types of schools are fully aware about the advantages and effectiveness of teaching aids. Both types of school teachers use teaching aids. However, the teachers of private schools use more teaching aids and models comparatively. Farida and Madeeha (2000) in their

comparative study of private and public schools with respect to administrators' role concluded that heads of government schools performed better in their administrative planning for the whole year and academic activities while the heads of private schools show more concerns about co curricular activities.

The negative experiences of government schools have instigated parents to shift children from government to private schools. Michael Barber (2010) in his paper points out towards the unfortunate experiences the parents have regarding poor facilities, locations and learning outcomes which reduces parents' enthusiasm for government schools. Furthermore, numerous other studies illustrate the cost effectiveness of the private schools as compared to the government schools in providing decent education facilities and better quality of learning levels. The Learning and Education Achievements in Punjab Schools (LEAPS) study was conducted to evaluate the education sector of the Pakistan using a detailed Punjab's data set. The study conducted from 2003 to 2007, found a significant and rising role of low fee private schools, especially in the rural areas of Pakistan. In spite of government school teachers receiving higher salaries and government schools using twice the resources to operate as compared to private schools, the learning levels of children in private schools continued to be significantly better than public sector schools. (Andrabi, 2006) in their paper highlighted the strengths and weaknesses of the rural model adopted by the private institutes in the rural areas. The strength of these schools is the locally available, moderately educated female teachers who have little or no prospects outside their villages. They are hired at low salaries to minimize the fee structures, while at the same time, promising better learning outcomes as compared to the government schools. On the other hand, these characteristics required in the teachers may also act as constraint towards achieving higher education outcomes. In an absence of the specifically required pool of teachers, the low cost private schools might not be established in the villages. Alderman (2001) also emphasized in their paper that private schools no longer remain an urban or elite phenomena, but rather poor households also use these facilities to a large extent, due to their better locations, low fees, teachers' presence and better quality learning, especially in the fields of mathematics and language. Even though private schools started off as an urban phenomenon, more recently they have mushroomed in rural areas as well.

RESEARCH METHODOLOGY

A Descriptive-Comparative research design was used to conduct the current research with the purpose to compare the English language proficiency level in written communication skills of 8th grade students of Public schools, Private schools and Missionary schools. All grade 8 students of Public schools, Private schools and Missionary schools of Lahore were included in the population of this research. The sample of the current research was collected from 2 Public schools, 2 Private schools and 2 Missionary schools while 20 students from each type of school were tested in which 10 were boys and 10 were girls so the gender representation was equal. English Language Proficiency Test in writing skills was the tool used for this research. Test was distributed among students of different schools and they were directed to write an essay on the topic “Your favorite TV. Programme” (100 -150 words). Sub skills of writing were assessed and compared with the help of test. The skills which were assessed are 1) Cohesion and Coherence, 2) Vocabulary, 3) Spelling and Punctuation, 4) Grammar and 5) Organization. The collected data was analyzed by using a combination of descriptive statistics and inferential statistics.

RESULTS AND FINDINGS

As mentioned earlier, the purpose of the current research was to compare the written proficiency of students from private, public and missionary schools. This section of the article describes the data analysis conducted on the data collected from a sample of 60 students with equal representation of gender in sample. Table 1 presents the descriptive statistics in form of mean score and standard deviation of the students on the construct of written communication within the framework given in the methodology section.

Table 1: Mean score and Standard Deviation on Written Communication scored by Students of Public, Private and Missionary Schools

	Private School		Public School		Missionary School	
	Mean	SD	Mean	SD	Mean	SD
Cohesion and Coherence	6.15	1.631	4.60	1.046	7.05	1.276
Vocabulary	6.30	1.780	4.20	0.768	6.70	1.261
Spelling and Punctuation	5.95	1.731	4.10	.852	6.55	1.432
Grammar	5.65	1.843	4.45	1.146	6.70	1.302
Organization	5.95	1.791	4.30	0.733	6.90	1.334
Overall	29.55		21.70		34.20	

Table 1 shows that mean score and standard deviation of missionary school students in writing skills is greater than that of students of Private and Public schools. Table also shows mean and standard deviation of the scores of public-school students on written proficiency test of English. The maximum possible score for each category was 10 and the students were assessed by using specialized rubrics. In students of public school, mean of Cohesion and Coherence was 4.60 while standard deviation was 1.046; mean score of vocabulary is 4.20 while standard deviation was 0.768; mean score of spelling and punctuation was 4.10 and standard deviation was 0.852; mean score of grammar was 4.45 and standard deviation was 1.146 while mean score on organization was 4.30 and standard deviation was 0.733. The overall mean score on the construct of written communication was found to be 21.70 for the students of public schools.

With reference to the performance of students by private schools, mean score and standard deviation of the scores for cohesion and coherence were 6.15 and 1.631 respectively; mean score and standard deviation were 6.30 and 1.780; mean score and standard deviation for the aspect of spelling and punctuation were 5.95 and 1.731 respectively; mean score and standard deviation for grammar were 5.65 and 1.843 respectively while mean score and standard deviation for organization were 5.95 and 1.791 respectively. The above table shows that the overall score of the students of private schools was found to be 29.55.

The above table shows the mean score and standard deviation for each dimension of the constructed as scored by students of missionary schools. The students from missionary schools score 7.05 mean score on the aspect of cohesion and coherence with the standard deviation 1.276; mean score and standard deviation on vocabulary were 6.70 and 1.261 respectively; mean score and standard deviation on the dimension of spelling and punctuation were 6.55 and 1.432; mean score and standard deviation for grammar were 6.90 and 1.302 respectively while mean score and standard deviation for organization were 6.90 and 1.334. The overall score on the construct of written communication was found to be 29.55 for the students of missionary schools.

In order to study the significance of the difference between the three groups selected for the current study, the test of analysis of variance (ANOVA) was conducted. Table 2 shows the inferential statistics of ANOVA applied on the overall score on the base of the type of schools.

Table 2: ANOVA on Overall score of Students in Public, Private and Missionary Schools

	Sum of	Df	Mean	F	Sig.
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		Squares		Square		
Cohesion and Coherence	Between Groups	61.433	2	30.717	17.115	.000
	Within Groups	102.300	57	1.795		
	Total	163.733	59			
Vocabulary	Between Groups	72.133	2	36.067	20.234	.000
	Within Groups	101.600	57	1.782		
	Total	173.733	59			
Spelling and Punctuation	Between Groups	65.233	2	32.617	16.948	.000
	Within Groups	109.700	57	1.925		
	Total	174.933	59			
Grammar	Between Groups	50.700	2	25.350	11.873	.000
	Within Groups	121.700	57	2.135		
	Total	172.400	59			
Organization	Between Groups	69.233	2	34.617	18.801	.000
	Within Groups	104.950	57	1.841		
	Total	174.183	59			
Total Marks	Between Groups	1596.633	2	798.317	21.122	.000
	Within Groups	2154.350	57	37.796		
	Total	3750.983	59			

Table 2 shows the results of ANOVA for differences in language proficiency on the basis of the kind of school. The hypothesis formulated for ANOVA was “There is no significant difference in English language proficiency level in written communication skills of 8th grade students of Public schools, Private schools and Missionary schools” was rejected. The results showed that there existed significant difference in English language proficiency level in written communication skills of overall grade 8 students of Public schools, Private schools and Missionary schools since the p value was found to be 0.00 which is less than 0.05. The p value on the basis of kind of school was found to be significant ($p < 0.05$). There was a significant difference in cohesion and coherence in written communication skills of overall score of grade 8 students of Public schools, Private schools and Missionary schools as the p value was found to be 0.00 which is less than 0.05. There existed significant difference in vocabulary in written

communication skills of overall students of grade 8 of Public schools, Private schools and Missionary schools as the p value was found to be 0.00 which is less than 0.05. There was again significant difference recorded in spellings and punctuation in written communication skills of overall score of grade 8 students of Public schools, Private schools and Missionary schools as the p value was found to be 0.00 which is less than 0.05. In grammar, there was significant difference in written communication skills of overall score of grade 8 students of Public schools, Private schools and Missionary schools as the p value was found to be 0.00 which is less than 0.05. There existed significant difference in organization in written communication skills of overall score of grade 8 students in Public schools, Private schools and Missionary schools as the p value was found to be 0.00 which is less than 0.05.

CONCLUSION

It is concluded that there is a significant difference in English language proficiency level in written communication skills of grade 8 students of Public, Private and Missionary schools. Writing skills of Missionary schools are better than Private and Public schools while writing skills of Private schools are better than Public schools. After comparing the entire set of sub skills included in the research, it is concluded that students of Missionary school are better in Cohesion and Coherence, Vocabulary, Spelling and Punctuation, Grammar and Organization of the text. Students of Public School are weak in all the five sub skills included in the research and the students of Private school are average in their performance. Students of Public schools secured less than fifty percent marks in English language proficiency test; the students of Private and Missionary school obtained more than 50 percent marks in the English language proficiency test and those of Missionary school are even better than private schools. The mean and standard deviation of Missionary school students is greater than those of both the Private and Public school. At some points in this study, not much difference is noted between the students of Private and Missionary schools, but a great difference is present among the students of Public school when compared with students of private or missionary school. So, it's concluded that the students of Missionary school are better in writing skills than students of Private and Public schools and writing skills of students of Private schools are better than students of Public schools. The higher score of missionary school students implicate that the private and public schools must also employ the teaching methodologies adopted by missionary schools in order to equip their students better in written communication.

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AN ANALYSIS OF RELATIONSHIP BETWEEN ENGLISH AND URDU READING SKILLS OF SECONDARY SCHOOL STUDENTS IN MULTAN

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ABSTRACT

In perspective of analyzing Cummings' inter dependence hypothesis, this study mainly aimed at to find out correlation between Urdu and English reading comprehension. A mixed method research design was adopted to achieve the objectives of the study, as the data related to this study was both qualitative and quantitative in nature. Four researcher made tools used to gather quantitative and qualitative data included Urdu Reading Comprehension Test, an English Reading Comprehension Test, Questionnaires for English and Urdu Language Teachers and interview protocol. Data also included BISE results for 9th class in the subjects of Urdu and English. One thousand (1000) clustered sampled students (500 males, 500 females) were administered Urdu and English Reading Comprehension Tests while BISE results of the same students in the subjects of Urdu and English were also collected. Questionnaires were administered to 150 randomly selected Urdu and English Language teachers of these students (60 male, 90 female). Results of the study show that there is negative relationship between Urdu and English Reading Comprehension but there is positive but weak correlation between achievement scores on Urdu and English subjects in view of BISE results. Results of the questionnaire survey/interview show that teachers of Urdu and English use grammar translation method and lecture method in teaching their subjects.

Keywords: reading comprehension, Urdu, English, Correlation, Secondary school

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INTRODUCTION

Any language includes certain aptitudes, for instance standardization in, talking, perusal and composing. Perusal ability assumes a major operate in language ability. Relationship of ability in mother language and therefore the resulting language has been a section of enthusiasm for language specialists for a few times. An investigation of this relationship will facilitate in grip bound language instructing strategies that will bring on higher English perusal ability within the second language students.

Learning understanding incorporates 2 degrees of getting ready, low-level handling, and elevated level handling. Low-level getting ready includes linguistics handling that happens once we encipher the importance of a word and relate it to comparable words. Elevated level getting ready includes basic and speech sound acknowledgment, the handling of sentence and syllable structure and their connected sounds. In each of this cycle's reliance might develop into a central purpose in making perusal ability in second language understudies. Reliance evaluations are represented as; the investigation of Urdu perusal power with English perusing ability at auxiliary level understudies. Urdu is our native language and students are acceptable in their local language as distinction with the next language.

Objectives of the Study

The main objectives of this study were these;

1. To find out correlation between Urdu and English reading comprehension scores.
2. To determine the relationship of Urdu comprehension with the overall scores gained in Urdu subject.
3. To point out the relationship of English comprehension with the overall scores gained in English subject.

Researcher Questions

This study was conducted to find out the answers to the following search questions;

1. How Urdu and English Reading skills correlate with each other?
2. What is the relationship of Urdu comprehension with overall scores gained in Urdu?
3. What is the relationship of English comprehension with overall scores gained in English?

Literature Review

Students of English language as second language learners are those students who are unable to communicate fluently in English, who mostly come from non-English speaking environment and

who require specialized instructions in English language. This gives rise to the area of second language learning and acquisition.

Second language learners may be involved in using English in wide range of situations such as chatting with friends, shopping for matters from market, asking instructions within side the street, discussing a hassle in tutorial, giving a seminar presentation and so on. To communicate effectively in another language i.e. English variety of tools are needed. Communication is a complex activity, even in our first language, and can cause difficulties for anyone engaged in it. Second language students may not remember the exact words or expression in which they want to communicate. In this case, they want to undertake certainly considered one among a set of verbal exchange strategies, which contain locating any other manner of expressing the favored which mean in unique forms. There are numerous problems that have an effect on the students' mastering English as a second language.

These factors may come from many components including social environmental issues, the difference of culture etc.,

There are some factors that affect the learners in learning English language which are presented by Normazidah, Koo, and Hazita (2012). (01, 02)

1. English is considered as a difficult subject.
2. English language learning depends on the English subject teachers.
3. There is no any kind of support to use English language in daily routine.
4. There are limited opportunities for the students to use the English outside the classroom.
5. There is limited vocabulary of English language for the students and lack of English reading material.
6. Lack of motivation for the scholars to analyze English language.
7. There is negative attitude of the scholars toward land language learning.

Researchers in the field of psychology and education, especially language learning, consider a number of psychological explanations that mean different meanings from different contexts and perspectives. (Alhmali, 2007). From a moral point of view, Montano and Kasprzyk (2008) argue that, "Attitude is determined by individual beliefs about the consequences or moral character (moral beliefs)," weighted by evaluations of those outcomes or attributes. Therefore, a person who holds firmly to the belief that the most important consequences of moral degradation will be

morally sound. On the other hand, a person who holds firmly to the belief that the most important consequences of moral degradation will be the result of a negative attitude.

Reid (2003) stated, "Attitude is important to us because it cannot be properly separated from the subject." Attitude is considered an important factor affecting language performance (Visser, 2008). Success in the target language depends not only on the ability to read, but also on the learner's perceptions of language learning. This means that the language of learning should be spoken primarily as a social and psychological phenomenon rather than as a mere literary one. Kiptui and Mbugua investigated that the negative attitudes towards English were the main and psychological factors that leading to the poor performance of the English language in Kenyan high schools. (05, 06)

In 1992, B. Baker proposed a complete theoretical model, focusing on the importance of conducting psychological research in the field of language learning. Baker (192) states, "In the life of a language, concepts in this language appear to be essential to language recovery, preservation, decay or death." Recently, De Bot. ET. Al. (2005) argue that language academics, researchers and students ought to acknowledge that top motivation and positive angle by learners promotes second acquisition. Therefore, if a student does not have the interest and tendency to find the target language to communicate with others, the student will develop a negative attitude and will not be motivated and motivated to learn the language. Therefore, students' attitudes can contribute to language learning because it can affect their performance in acquiring the target language. (06, 07)

Theoretical background of Language Learning

There are various theories and hypotheses about the second language learning that how students learn the second language. There are several kinds of researches about second language learning which are closely related to different kinds of disciplines such as linguistics, psycholinguistics, sociolinguistics and most of the theories about the second language that can be identified having roots in one of them. There are some theories about the second language learning.

For second language learning, attaining the accurate meaning is the most important task for the students. Meanings are the most important part of language, not the exotic sounds or elegant sentence structure. There are several types of meanings, lexical, (Lexical meanings are the meaning that is stored in our mental lexicon). Grammatical, (Grammatical meaning comes into consideration when calculating the meaning of a sentence).

Semantic, (Semantic and pragmatic meaning are those which are mostly depends on the context) meaning is word meaning), which requires knowledge of the world, for example, when someone asks on the phone, “Is there Aslam”? These words clearly state that the main focus is on knowing that the person needed (Aslam) is present to speak and not his physical presence. All words that mean to contribute to the acquisition of meaning usually have a combined sound language. (Anderson, J. R. 1992). (07)

Socio-cultural theory was developed by Wertsch in 1985, this theory was discovered from the work of Lev Vygotsky and the Vygostk in Moscow from the 1920s. Sociocultural theory explained that the notion of the function of human mental is participating from cultural meditation into social activities.

In the competition model is considered as it is one of the major cognitive theories, which analyze that how learners organize the knowledge of language learning that is based on the analysis of how can speaker analyzed the meaning of different sentence structure. English speakers depend on word order, the German speakers used morphological harmony, and the understanding of the status of noun referents, and stress, and the Italian speakers depends on the agreement and stress. The competitive model states that people use language clues to get meaning from a language, rather than relying on language universities. According to this theory, when they acquire a second language, students acquire competitive environments and have to decide which the best way to get the meaning is. (Anderson, J.R. (1992) (07)

Declarative model is used to recognize how language knowledge can be stored. This model is dependable with a similarity made in general cognitive science between the storage and revival of facts and on the other hand considerate how to carry out operations. The declarative knowledge depends on the arbitrary in sequence, for instance irregular forms of verb that are stored in the declarative memory of the brain. Quite the opposite, knowledge about the language’ rules that the grammatical words in an order of procedural information and it is stored in the procedural memory. (Anderson, 1992)

The Interdependence Hypothesis and Reading Skill

The Linguistic Interdependence Hypothesis was founded by Cummins (1978), expresses that information on tongue (L1) may even be successfully moved all through the strategy of learning a subsequent language (L2). The data and language aptitudes of L1 that a child has may even be

helpful in building up the relating abilities in L2. The theory of unfamiliar reliance has been officially enunciated as follows (Cummins, 1981)

To the degree that guidance in Lx is viable in advancing capability in Lx, move of this capability to Ly can happen gave there's sufficient presentation to Ly (either in school or condition) In solid terms, what this standard suggests that is that in, suppose, Urdu-English bilingual program assumed for local speakers, English guidance that creates English perusing and composing aptitudes isn't simply creating English aptitudes; it's moreover building up a more profound hypothetical and jargon capacity that is effectively related to the occasion of ability in the regular In something else, though the surface viewpoints (e.g., elocution, certainty) of changed dialects are obviously confine, there is a hidden intellectual/scholarly experience that is ordinary transversely dialects. This normal basic capacity makes possible the exchange of mental component, instructional exercise or education related capacity from one language to an additional language. In aggregation to its applications to second learning programs, the commonality speculation furthermore attempted to report for associated wonders possibly the never-endingly goodish relationships somewhere in the range of's L1 and L2 understanding aptitudes. These relationships endure even transversely reasonably detached dialects (e.g., Chinese and English) (Cummins et al., 1984; Genesee, 1979) telling that the basic capacity should be constrained to be arranged not while phonetic capacity anyway moreover in dynamic jargon. subsequently, at stretches the instance of sorted out dialects that are significant from comparative asset of dialects (e.g., Greek and Latin at spans the instance of Sentiment dialects), move can joins each etymological and digest fundamentals however, at spans the instance of dissimilar dialects, move can comprise in the principle of hypothetical and mental element nuts and bolts (e.g., learning systems). to explain, choose the logical origination of synthetic change, in dialects love Spanish, French, and English, the articulation is come about because of Greek roots, and an understudy who is receptive to the articulation in Lx and comprehends the thought can move each phonetic and digest nuts and bolts from Lx to By differentiation, partner exceedingly in a vary situation of frightfully disparate securing, alone the theoretical parts are adaptable. These records for the upper relationships realistic across the same as contrasted and completely totally various dialects (Genesee, 1979).

More modern investigation has uncovered that totally various choices of capacity and pre-proficiency aptitudes move across dialects (e.g., synchronic phonetics mindfulness; Geva, 2000).

In survey, semantics situation relies upon the 5 sorts of move are attainable: 1. the exchange of unique parts (for instance, discerning idea of photosynthesis) 2. The second exchange of meta-intellectual 3. The third assortment of move is commonsense parts of language use (for instance, availability to wish chances 4. The fourth assortment of move is exact jargon basics (data of the recommends of photo in photosynthesis) 5. The fifth and afterward the last very exchange is synchronic phonetics awareness - the information that words are made out of discrete sounds.

Xiangying jiang concentrated on The entirety of Spirits' Day, Gregorian schedule month 2011 regarding the matter The Part of tongue capacity and Second Language Capability in Second Language Perusing. This examination analyzed the connection of first language (L1) aptitude, second language (L2) capability, and L2 perusing appreciation with 246 Chinese school students. L1 capacity and L2 capability were estimated with school affirmation tests in Chinese and English. L2 perusing perception was estimated with the perusing appreciation area of a TOEFL and an analyst created section understanding check. L1 capacity was discovered to be tolerably connect with L2 language capability, as was L2 language capability with L2 understanding appreciation. Relapse examinations relentless that L2 language capability represented 27%-39% of difference in L2 understanding appreciation, while L1 capacity represented less than 6% of These discoveries affirmed that L2 language capability contributes up to 30% of the fluctuation in L2 understanding execution, yet didn't offer evidence that L1 capacity contributes up to with respect to 20% of the change in L2 perusing.

C. Missionary delegate, Jeffrey R. Haring Silverman concentrated in 2017 on the point Etymological commonality between Spanish language and Germanic perusing. This examination investigate impacts of Spanish oral language aptitudes on the occasion of English oral language capacity and perusing appreciation among 156 bilingual Latino children in second through fifth grade whose tongue was Spanish and whose subsequent language utilizing an accomplice successive vogue (partner 1: second third grade; associate 2: third fourth grade; companion 3: fourth-fifth grade), they numerable evaluation 2-5 directions of English oral language They surveyed whether or not or not early degrees of Spanish jargon and sentence structure anticipated; (an) understudies' evaluation English oral language abilities and understanding perception; and (b) studentsgrade 2-5. Development in these Outcomes indicated that Spanish punctuation expected all evaluation five English oral language abilities and understanding cognizance. Spanishsyntax was also completely identifying with development in understanding perception. Spanish language

structure was moreover completely identifying with development in English phonetics information. Spanish jargon wasn't with respect to any English oral language aptitudes or understanding results. On paper, results suggest that investigations of "move" from Spanish to English are conceivable qualified by the builds underneath study and in this manner the implies that by which they're operationalized. Instructionally, operational with bilingual students around issues identifying with Spanish and English grammar has suggestions for bilingually and meta-etymologically arranged instructing approaches that fabricate semantic information and advance understanding perception.

Research Methodology

Co-relational research design was used in this study. All the secondary level students were treated as the population of the study. All the students studying in Multan division were the target population of this study. While the secondary level students of Multan city were considered as the sampling frame. Clustered sampled students of 9th class from randomly selected 10 Government Secondary Schools (Male=5, Female=5) were treated as the sample for this study. All the teachers teaching subjects of English and Urdu in these schools were included in the sample of the study for interview. All the students were given Urdu and English Comprehension tests (reliability=.89 and .88 respectively), board results (marks of English and Urdu) were also used to find certain correlations.

Table 1

Sample of the Study

S. No.	School		Teachers		Total	Students		Total
			Male	Female		Male	Female	
			English	Urdu				
1.	GGHSS	Piran	6	7	13		100	100
	Ghaib							
2.	GGHSS		6	8	14		100	100
	Moonlight							
3.	GGHS		4	5	9		100	100
	Sameejhabad							
4.	Govt	Muslim	7	6	13		100	100

	Girls	High					
	School						
5.	Govt Girls Iqbal	6	6	12	100	100	
	Secondary						
	School						
6.	GHSS	6	6	12	100	100	
	Sameejhabad						
7.	Govt.	6	7	13	100	100	
	JamiaAlum						
	High School						
8.	Govt.	High	7	7	14	100	100
	School						
	Aamkhas Bagh						
9.	Govt.	Millat	6	8	14	100	100
	High School						
10.	Govt.	Muslim	7	6	13	100	100
	Boys	High					
	School						

Data Analysis

Pearson momentum correlation formula was applied to find correlations between Urdu and English scores.

Research Question

How Urdu and English Reading skill correlate with each other?

Table 2

Gender-wise correlation of Urdu and English Reading Skills (N=1000)

S. No.	Category	Gender	Mean Scores		Correlation
			Urdu	English	
1.	Comprehension	Male	7.79	4.69	-0.19
	Test	Female	8.60	6.31	-0.03
2.	9 th Class Results	Male	42.21	37.33	-0.08

Female	46.81	35.59	-0.07
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Table 2 shows the negative correlation between Urdu and English reading skill. The average scores comprehension tests of male students in Urdu and English subjects are 7.79 and 4.69 and it shows negative correlation which is -0.19, on the other hand average scores of female students are 8.60 and 6.13 it also show negative correlation which is -0.03. The average scores of overall results of subjects English and Urdu of male students are 42.81 and 37.33 it has also negative correlation -0.08 and the average scores results of female students are 46.81 and 35.59 these results shows negative correlation which is -0.07.

Research Question

What is the relationship of Urdu comprehension with overall scores gained in Urdu?

Table 3

Correlation of Urdu Reading Skill

S. No.	Category	Average score	Correlation
1.	Comprehension Test	8.2	0.08
2.	9 th Class Results	39	

The above table 3 show the average score of comprehension test of subject Urdu which is **8.2** and the average scores of result Urdu which is **39** and it shows the positive correlation between Urdu reading comprehension test and the results of Urdu subject that is **0.08**.

Research Question 4:

What is the relationship of English comprehension with overall scores gained in English?

Correlation of English Reading Skill

N=1000			
S. No.	Category	Average score	Correlation
		English	
1.	Comprehension Test	5.50	

2.	9 th Class Results	36.4	0.14
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The above table no. 4.7 show the average score of comprehension test of subject English which is 5.50 and the average scores of result English which is 36.4 and it shows the positive correlation between English reading comprehension test and the results of English subject that is 0.14.

FINDINGS

Following were the findings of the study on the basis of results;

1. There is negative Correlation between English Reading Comprehension and Urdu Reading Comprehension Test.
2. The average scores of English Reading Comprehension Tests show the positive correlation with overall scores of English
3. The average scores of Urdu Reading Comprehension Tests show the positive correlation with overall scores of Urdu.
4. Teachers use grammar translation method, literary text, communicative approach and direct method in teaching English and Urdu subject.

Following conclusions were reached after results and findings of the study; Whereas the results of English reading comprehension tests and Urdu reading comprehension test show the negative correlation. And the gender-wise correlation between the English reading comprehension test and Urdu reading comprehension test is also negative. On the other hand the average scores of English reading comprehension tests show the positive correlation, and the average scores of Urdu reading comprehension tests also show the positive correlation. And the teachers' questionnaire demonstrates that they all are agreeing that they mostly used literary text and direct method to teach the text from Urdu books to teach them Urdu text. And they use grammar translation methods, communicative approach, and direct method to teach the students English reading.

Recommendations

1. The subject teachers should also teach the students by using such methods which may prove helpful for the students to improve their reading skill in English and Urdu.
2. Language teachers should use activity based learning techniques for improving language skills in students.

3. The language teachers should also use motivational techniques to make actively participate in language class.
4. Similar research may also be conducted by using experimental research design for assessing the students' performance level in more authentic way.
5. In the same way next research may also be conducted on rural areas schools 'students, comparison of rural and urban schools and private schools can also be included in the study.
6. Relationship of mother language of students may also be analyzed in doing research on achievement in Urdu and English reading skill.
7. Other language skills like writing, speaking and listening may also be included in future research.

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IDENTIFICATION OF PROSPECTIVE TEACHERS' CHARACTERISTICS THROUGH PREFERENCES FOR COLORS

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ABSTRACT

The major objective of this study was to link the different characteristics of prospective teachers with their color preferences. This study was quantitative in nature. A self developed questionnaire was used as a research instrument. The validity of the instrument was done through pilot testing and expert opinion. The reliability of the instrument was calculated by using Cronbach alpha which was 0.75. The data were collected from 1469 male and female prospective teachers from two public sector Universities. The collected data were analyzed by using descriptive statistics, using SPSS. The results of the study revealed that most of the respondents preferred black color. The study also showed that those prospective teachers who preferred green, orange, purple, and red colors were identified as confident; those who preferred pink color had maximum fear of unknown; those who preferred black color can diagnose the best; who preferred one of the colors black, white, orange, red, and pink were identified more aggressive. The prospective teachers who preferred green color were identified as good problem solvers.

Key words: color psychology, personality characteristics, prospective teachers

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INTRODUCTION

Investigating the traits of individual's personality has always been a mystery and interesting topic for psychologists and researchers. There are many areas related to the personality traits. One of the research areas in this regard is a color psychology. It is defined as the study of color as a determinant of human behavior (Whitfield & Wiltshire, 2009). Human response to different colors provides basis for personality assessment techniques which have included several tests about the construction of personality (Warner, 2002). A famous psychologist Carl Jung has been associated most famously with color psychology, pioneering its stages. He was interested in the meanings and properties of colors, and in the potential of art to be used like a tool for psychotherapy (Charles, 1995). Many research has been done in past on the association between mood and color preferences covered feminine perspective (Reed, 2012).

According to Whitfield and Wiltshire (2009), there are six principles providing the base for color psychology model. The principles are: particular meaning can be occupied by color, meaning is learned or are innate biologically, the person who perceives evaluation automatically may be causes the color perception, the process of evaluation forces motivated behavior by color, usually color automatically imposes its influence, and finally that the context is also important with the meaning and effect of color. Color is usually taken as a perceptual stimulus that is related to the aesthetic sense of the individual (Park, 2018), but color psychology goes beyond aesthetics and says that there is a link between liking a color and psychological functioning of the individual. In the earlier years of the studies about color psychology, the response to colors was taken as an indicator of emotional aspects of one's personality. A large number of studies in that period supported the above-mentioned idea, but later it was found that other observable and non-observable aspects of one's personality can also be known by the choice of the color. Personality characteristics are usually explored in the individuals by their preferences to different colors. Many color tests and self description techniques are available to test the personality characteristics (Warner, 2002).

Literature supports the role of preferences to color in the identification of the personality characteristics of the individuals. There are similar studies in the world like, Bear (2012), Murray and Deabler (2010), and Buckner (2012). that provide the base for the current study in Pakistan. An individual may have many qualities and characteristics such as confidence, fear of unknown, courage, aggression, anger, problem-solving, communication skills etc.

In the context of education, teachers are one of the most important players (John, 2000). It was interesting to investigate the personality traits of prospective teachers by their preferences for colors. The results of the study may be helpful for the teachers to know the personality characteristics of prospective teachers and they manage and build good relations with them. Similarly, students may understand the personality traits of teachers by their preferences for colors; adjust themselves and learn better in the classroom. Keeping in mind the significance of the topic, main objective of this study was to identify the characteristics of prospective teachers by their preference of color.

Methodology

The study was quantitative in nature. Descriptive research design with the survey method was used to identify the characteristics of prospective teachers. Convenient sampling technique was used to collected large number of data using questionnaire. The questionnaire was based on five point Likert scale i.e. Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (DA), and Strongly Disagree (SDA). It covered eight characteristics i.e. confident, fear of unknown, anger, courage, aggression, problem-solving, and good communication. The instrument was developed by the researchers themselves.

The validity of the instrument was verified through opinion five experts. The CVI Index was calculated i.e. 0.95. Piloting was also done on 30 prospective teachers. The reliability Alpha co-efficient was calculated. Its value was found to be 0.75. The final data were collected from 1469 respondents from two public sector universities. The data were collected through personal visits and with the help of a students team (consisting of six members). They voluntarily collected the data. The collected data were analyzed by using descriptive statistics using frequencies, percentages and Bar graphs.

Findings

In the procedure of responding the questionnaire, firstly the respondents had to select only one color from the list of eight colors: red, green, yellow, white, black, blue, pink, purple, and orange.

Table 1

Number of male and female Respondents with preference of colors

	Color choice								Total	
	Black	White	Blue	Green	yellow	orange	purple	Red	pink	
Male	223	103	112	73	23	26	36	31	26	653

	332	100	79	58	28	10	88	39	82	816
Total	555	203	191	131	51	36	124	70	108	1469

Table 1 shows that most of the respondents select black color i.e. 37.8%. The colors: white, blue, green, purple, pink, red, yellow, and orange were selected by 13.8, 13, 8.9, 8.4, 7.4, 4.8, 3.5, and 2.5 percents of the total respondents respectively. The female prospective teachers preferred the black color more than the males. The second and the third most preferred colors by the males were blue and white respectively. Very few males selected yellow, pink, and orange colors. Most of the females also selected black color. Females preferred white, purple, and pink on the second, third, and fourth number respectively. The details are presented in the figure 1.

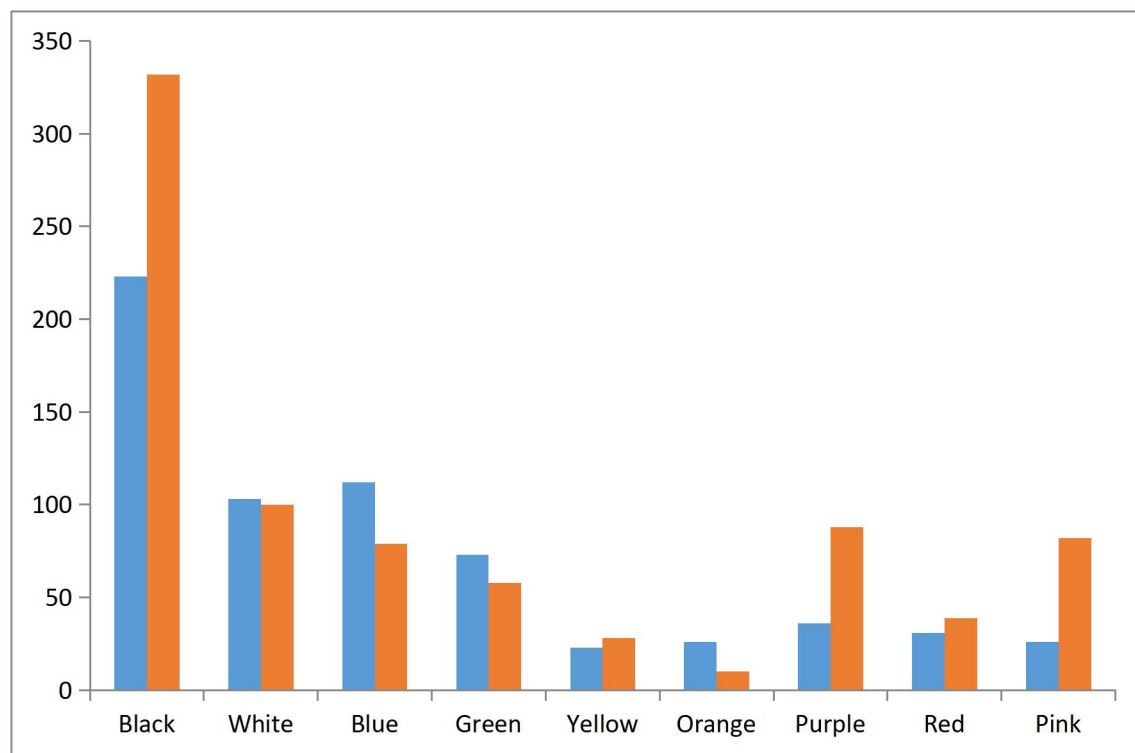


Figure 1: Gender wise color preferences

Table 2. *Confidence and Color Choice*

Confidence		Color Choice									
No	Count	Black	White	Blue	green	yellow	Orange	purple	Red	pink	Total
No	Count	118	43	40	18	13	7	24	13	24	300

	%										
	within	21.3	21.2	20.9	13.7	25.5	19.4	19.4	18.6	22.2	20.4
	color										
	choice										
Yes	Count	436	160	151	113	38	29	100	57	84	1168
	%										
	within	78.6	78.8	79.1	86.3	74.5	80.6	80.6	81.4	77.8	79.5
	color										
	choice										
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 2 shows that most of the prospective teachers i.e. 79.5% were confident in their own opinion. The persons, who preferred black, white, blue, yellow, and pink colors were not confident in their opinion but the people who preferred green, orange, purple, and red colors were confident. Especially the ones who preferred green color were very confident. Details were shown in figure 2.

Table 3. Fear of unknown and color choice

Fear of Unknown		Color Choice									
		Black	White	Blue	green	yellow	Orange	purple	Red	pink	Total
No	Count	333	118	117	83	34	28	72	45	47	877
	%										
	within	60.0	58.1	61.3	63.4	66.7	77.8	58.1	65.2	43.5	59.7
	color										
	choice										
Yes	Count	221	85	74	48	17	8	52	24	61	590
	%										
	within	39.8	41.9	38.7	36.6	33.3	22.2	41.9	34.8	56.5	40.2
	color										
	choice										
Total	Count	555	203	191	131	51	36	124	69	108	1469

Table 3 shows that most of the prospective teachers (59.7%) were of the opinion that they had no fear of unknown i.e. the prospective teachers who preferred black, blue, green, yellow, orange, and red colors, did not have fear of unknown but the ones who preferred white, purple, and pink had fear of unknown. Those who preferred the pink color had the highest level of fear of unknown. Details were shown in figure 2.

Table 4. Diagnose well and color choice

Diagnose well		Color choice									
		black	white	Blue	Green	yellow	orange	purple	red	Pink	Total
No	Count	149	57	49	40	15	8	35	19	32	404
	% within color choice	26.8	28.1	25.7	30.5	29.4	22.2	28.2	27.1	29.6	27.5
Yes	Count	405	146	142	91	36	28	89	51	76	1064
	% within color choice	73.0	71.9	74.3	69.5	70.6	77.8	71.8	72.9	70.4	72.4
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 4 shows that most of the prospective teachers (72.4%) can diagnose well. The ones who preferred black, blue, orange, and red colors could diagnose well, but the prospective teachers who preferred white, green, yellow, purple, and pink could not diagnose well. The person who preferred black color could diagnose the best. Details are shown in figure 2.

Table 5. Courage and color choice

Courage		Color choice									
		black	White	blue	Green	yellow	orange	purple	Red	pink	Total

No	Count	87	36	28	22	7	7	17	7	21	232
	% within color choice	15.7	17.7	14.7	16.8	13.7	19.4	13.7	10.0	19.4	15.8
Yes	Count	468	167	163	109	44	29	107	63	87	1237
	% within color choice	84.3	82.3	85.3	83.2	86.3	80.6	86.3	90.0	80.6	84.2
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 5 shows that most of the prospective teachers (84.2%) are courageous. Those who preferred black, blue, yellow, purple, and red were more courageous; especially the those who preferred the red color. The prospective teachers who preferred one of the white, green, orange, and pink colors were less courageous. Details are shown in figure 2.

Table 6. *Aggression and color choice*

		Color choice									
Aggression		Black	White	blue	Green	yellow	orange	purple	Red	Pink	Total
No	Count	251	87	88	73	25	14	58	32	48	676
	% within color choice	45.2	42.9	46.1	55.7	49.0	38.9	46.8	45.7	44.4	46.0
Yes	Count	303	116	103	58	26	22	66	38	60	792
	% within color choice	54.6	57.1	53.9	44.3	51.0	61.1	53.2	54.3	55.6	53.9
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 6 shows that mostly prospective teachers are aggressive i.e. 53.4%. The prospective teachers who preferred one of the colors these colors: black, white, orange, red, and pink were aggressive in nature; especially the prospective teachers who preferred one of the white or black color. The prospective teachers who preferred one of blue, green, yellow, or purple colors did behaved less aggressively. Details are shown in figure 2.

Table 7. *Anger and color choice*

		Color choice									Total
Anger		black	White	blue	green	yellow	orange	purple	Red	pink	
No	Count	246	100	93	75	25	19	69	27	57	711
	% within color choice	44.3	49.3	48.7	57.3	49.0	52.8	55.6	38.6	52.8	48.4
Yes	Count	309	103	98	56	26	17	55	43	51	758
	% within color choice	55.7	50.7	51.3	42.7	51.0	47.2	44.4	61.4	47.2	51.6
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 7 shows that mostly prospective teachers i.e. 51.6%. show anger The prospective teachers who preferred one of black and red colors showed anger especially those prospective teachers who preferred black color. The prospective teachers who preferred white, blue, green, yellow, orange, pink or purple colors mostly showed less anger. Details are shown in figure 2.

Table 8. Problem solving skills and color choice

		Color choice									Total
Problem solving skills		black	white	blue	green	yellow	orange	Purple	red	pink	
No	Count	158	57	51	19	20	8	25	16	25	379
	% within color choice	28.5	28.1	26.7	14.5	39.2	22.2	20.2	22.9	23.1	25.8
Yes	Count	397	146	140	112	31	28	99	54	83	1090
	% within color choice	71.5	71.9	73.3	85.5	60.8	77.8	79.8	77.1	76.9	74.2
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 8 shows that mostly prospective teachers are good problem solver i.e. 74.2%. The prospective teachers who preferred green, orange, purple, pink, or red were better problem-solvers especially those who preferred green color. Prospective teachers who

preferred black, white, blue, or yellow colors were not good problem solvers. Details are shown in figure 2.

Table 9. Good communication skills and color choice

Good communication		Color choice									
		Black	white	blue	green	yellow	orange	purple	red	Pink	Total
No	Count	102	39	41	28	18	6	22	19	16	291
	% within color choice	18.4	19.2	21.5	21.4	35.3	16.7	17.7	27.1	14.8	19.8
Yes	Count	453	164	150	103	33	30	102	51	92	1178
	% within color choice	81.6	80.8	78.5	78.6	64.7	83.3	82.3	72.9	85.2	80.2
Total	Count	555	203	191	131	51	36	124	70	108	1469

Table 9 shows that overall prospective teachers i.e. 80.2% have good communication. The prospective teachers who preferred black, white, orange, purple, or pink had good communication; especially the prospective teachers who preferred black color. The prospective teachers who preferred blue, green, yellow, and red did not have good communication skills.

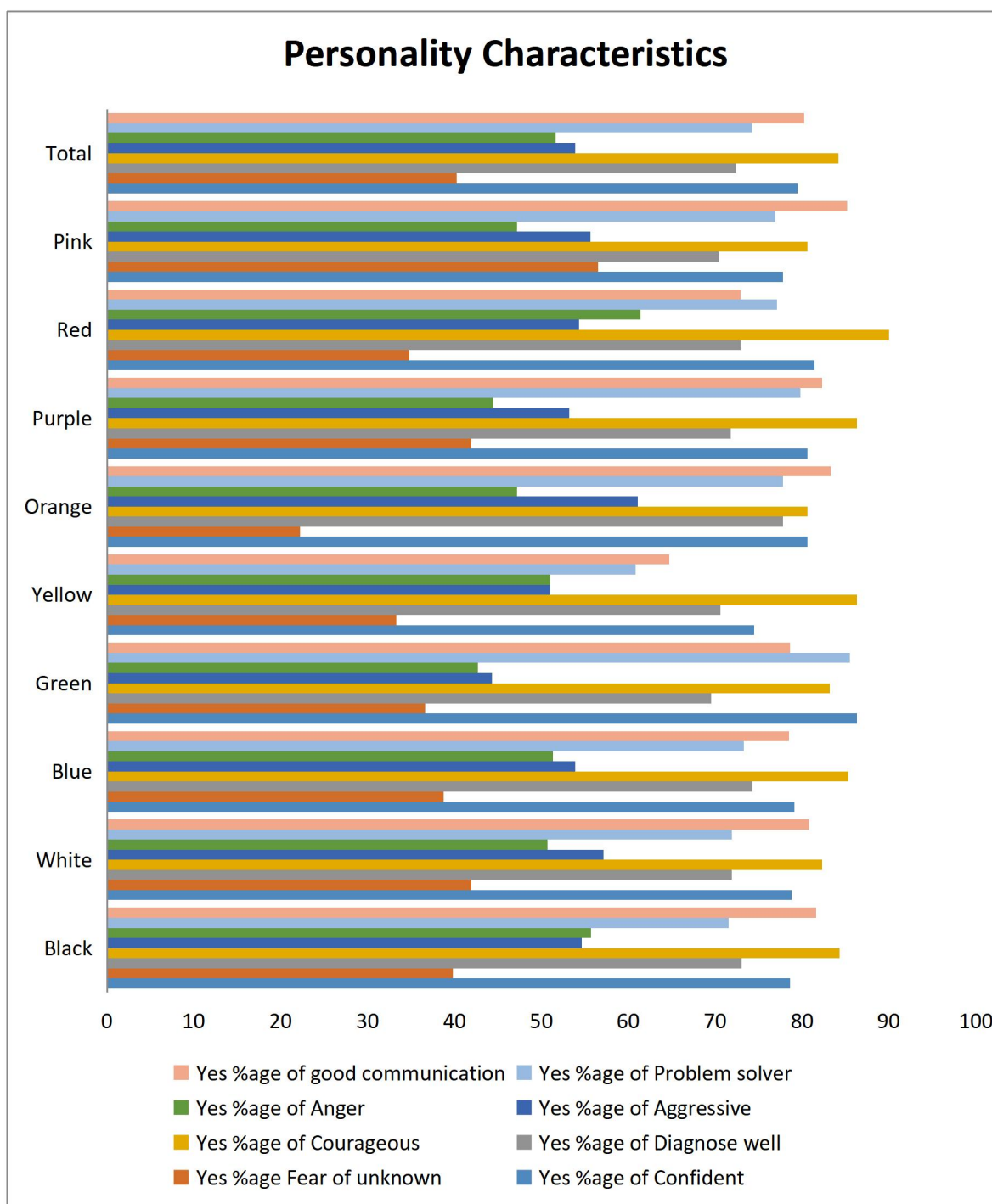


Figure 2: Personality characteristics of prospective teachers by their color preferences

Limitations of the Research

As it is the case with most of the research in social sciences, it is not claimed that all the above findings are applicable to every individual. There are always exceptions and limitations. We can only predict up to certain extent. There is need to conduct further research using random sampling in this area so that the results might be generalized.

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RELATIONSHIP BETWEEN SELF-EFFICACY AND ACHIEVEMENT SCORE AT SECONDARY LEVEL

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Abstract

The present study was determined to explore the secondary school students, self-efficacy and its relationship with their attitude and achievement in science. The variables of the study were self-efficacy, attitude towards science and achievement in science. Similarly, demographic variables like gender, locality and tehsils were also a part of this research study. The research was descriptive in nature and survey method was used to collect the data. The population of the study comprised of all 10th grade science students enrolled in government secondary and higher secondary schools of Faisalabad District. Two tehsils (Jaranwala and Faisalabad) were selected randomly from all 5 tehsils of Faisalabad district. A sample of 640 students was chosen from the population. Both the questionnaires along with Demographic Information Performa, for final study, were administered to 640 students. These students had already participated in 9th grade Board examination in the year 2013. The 9th class board result of these students was obtained from the website of the Board of Intermediate and Secondary Education, Faisalabad for the district of Faisalabad. The data was analyzed by using different statistical techniques. Descriptive statistics i.e. "Mean, Standard Deviation and Frequency Distributions" were applied for the description of data. Analysis of Variance was also used to find out the differences, therefore t-values and p-values also evaluated. The results revealed that in some indicators male had better achievement and science related attitude and the vice versa.

Keywords: Science related attitude, Achievement score

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INTRODUCTION

Self-efficacy is the power to produce the desired results. Many students have to face different problems of self-efficacy while participating in the different examinations. Those who acquire less achievement in the results, are lowering intelligent, may be the cause of self-efficacy. Bandura (1997) reported that the beliefs that one has the capabilities to execute the courses of actions required managing prospective situations. Woolfolk (2004) has presented it as, “beliefs about personal competence in a particular situation” (p.368).

Self-efficacy viewpoint describe how persons think, feel, stimulate themselves and perform. Such philosophy creates these different influences all the way through four main steps. They involve cognitive, motivational, affective and selection steps.

Self-efficacy and Achievement

The word self-efficacy is derived from the concept of some one's ability or capacity. According to Bandura's (1997) opinion of self-efficacy, the point is that students create logic of or a faith about, how well they are probable to perform in a work. The word of self-efficacy is linked with capacity of things being done (Lane & Lane, 2001), and has been indicated to effect presentation. Self-efficacy is elaborated not with the performances one has but the assessments of what individual can do with whatever performances individual possesses. Different researchers have conducted study that student with a high logic of academic self-efficacy return in numerous ways. They find to self-regulate added productivity, apply further effort, set higher goals, experience less self-efficacy and achieve better academic performances (Zimmerman, 1995; Wigfield & Eccles, 1992).

O, Brein, Pons and Kopala (1997) developed a study on eleventh grade students to evaluate their self-efficacy in mathematics, gender and career benefits in science and mathematics. The main findings of this study were that an important correlation was shown between mathematics-science self-efficacy, achievement, gender and in pursuing a profession in engineering or science. In a recent study by Pietch, Walker, and Champan (2003) the relationship between performance, general mathematics self-efficacy, and specific mathematics was analyzed. The studies also revealed a positive relationship between students' self-efficacy beliefs in the subject of mathematics.

According to Rodriguez's (2004) research study of the function of classroom evaluation in students' work on TIMSS, self-efficacy was a physically powerful forecaster at the classroom

stage. Self-efficacy had influences on achievement in mathematics at both the individual learner level as well as at classroom level. At the learner level, self-efficacy was dependent relative on the teacher's level of utilize of teacher prepared objective tests. Lodewyk and Winne (2005) conducted a study to discover the links between achievements and self-efficacy of secondary school students.

Papanastasiou & Zembylas (2004) have supported that the study was to observe how pupils' attitudes towards science and their thinking about themselves influence their achievements in science, and vice versa. Cyprus presented an interesting position for the study, being a budding nation that has adopted educational facts from a variety of countries, as well as the Greece, USA and UK. The present study reported the various influences that science attitudes and science achievement can have on each other, depending on the features of the educational systems of the country. It indicates various instructions for future research.

According to Cokadar & Kulce (2008), pupils' attitudes towards science were studied at average stage. Pupils' grade, favorite subject, attended school; families' monthly earnings and awareness of self-achievement narrate to the pupils' attitudes toward science. The pupils' attitudes towards science differ depending on pupils' grade, subject preference, attendance in school, family income and awareness of self-achievement. On the other hand, no difference was found of scholars' attitudes towards science related subjects to gender, parents' academic background and students' social perceptions.

According to Osborne, Driver and Simon (1998), some researchers also review that the low relationship between achievement and attitudes might also be referred to the professed difficulty of science, be short of effective teaching and the effect of cultural and family conditions. Reynolds and Walberg (1992) proposed that achievement influenced attitudes. Martin (1996) has also arranged data with reference to the student attitudes and achievement. Schmidt and Cogan (1996) have described that this database represented a significant occasion to attribute students' family environment and its connection to science achievement, particularly at the old 10th grade rank anywhere there has so far been very slight research.

Ramsden (1998), Weinburgh (1995), Simpson and Oliver (1985) have stated that research in science teaching shows that sexual category may also affect attitudes towards science. The conclusions have indicated that male student's attitudes are ultimately more

encouraging than female student's attitudes school science. Weinburgh (1995) expressed that male students indicated positive attitude towards science than females' students in science subjects. Greenfield (1996) predicted that 4th grader females had more science related attitude. Whereas both groups, interest levels declined during lower grade 7 to grade 8, boys' interest rose again during grade 9 to grade 12, but the interest of girls didn't.

According to Ahu (1995), female students are better than male students in science; consider that science is motivating; feel that science content is not difficult and enjoy science. Barrington and Hendricks (1988) noted no gender differences with respect to attitudes toward science with average and gifted students. Teppo (2004) presented that the boys expressed a more encouraging attitude towards mathematics, science and technology, while girls' preferred English. It is reported to be terms of attitudes toward science because they symbolize a common positive or negative sensitivity toward the prescribed study of science or an area of research (Koballa and Crawley, 1985).

Osborne and Collins (2000) have noted that inventive in its use of focus groups to investigate sixteen years old student's views and attitudes towards science in depth. So very amazingly, chemistry was shown to be less attractive than physics. Rana (2002) revealed that higher secondary school students have positive attitude toward science and showed better achievement score in science.

Dhindsa and Chung (2003) revealed that the attitude toward science and achievement score of females was better than females in co-educational institutes. Papanastasiou and Zembylas (2004) showed that attitude toward science and achievement score in science was significant. A research was conducted by Ali (2012) in Pakistan on secondary school students' attitude and achievement. The results show that 10th grade have positive attitude towards science subjects. The achievement level of these students was also greater.

Studies Conducted on Science Related Attitude and Self-Efficacy

Yalcinalp (2005) has conducted a research study on the association between user's attitudes toward computers and Internet self-efficacy and performance. The individuals were the 88 fresh students of the computer literacy course at the Faculty of Commercial Sciences. Findings have shown important connections between the attitudes, self-efficacy and performance of students on the course.

Sonmez, Duyqu, Simcox & Amanda (2003) have investigated the influences of high school scholars' attitude toward science and self-efficacy. Students' attitudes toward science and self-efficacy were evaluated with a 15-item Likert scale instrument obtained for the study. Analysis indicated that female students tend to be less confident as compared to male students before the workshop. This gender gap closed down after the workshop and we did not identify any difference between genders in students' attitudes toward science and self-efficacy based on post test scores.

Objectives of the Study

The objectives were as follows:

1. To examine the difference of students' attitude toward science in male and female students' self-efficacy beliefs.
2. To investigate difference of male and female students' achievement score in science subjects.

Research Questions

The questions were as under:

RQ 1: What is the difference of students' attitude toward science in male and female students' self-efficacy beliefs?

RQ 2: What is the difference of male and female students' achievement score in science subjects?

Research Design

The study demonstrated quantitative analysis of data that was descriptive. Two instruments: "Self Efficacy Questionnaire for Children (Muris, 2001) and Test of Science-Related Attitude (Fraser, 1981)" were used for the study. The researchers explored the difference and relationship among variables of self-efficacy and science related attitude to collect the data.

Population of the Study

This study was included to find out the secondary school students' self-efficacy and its relationship with their attitude and achievement in science with demographic information. Population comprised of 10th grade boys and girls studying science subjects in government secondary schools in 5 tehsils of Faisalabad district. These students were studying Chemistry, Biology, Mathematics, Physics and Computer Science as science subjects at 10th grade stage.

Sample of the Study

There are 5 tehsils of Faisalabad district and 489 (227 males, 262 females) government secondary schools are present in these 5 tehsils (EDO Office Faisalabad). It was impossible to gather information from such a big population. So, sample was obtained from this population. Two tehsils i.e. Jaranwala and Faisalabad were conveniently selected from five tehsils of Faisalabad district. Then two (02) male and two (02) female schools were randomly selected from urban and rural areas each. One class of science subject was randomly selected from sampled schools. All the 10th grade students from each selected class were included in the sample. These students had to appear in secondary school certificate examination.

Research Instruments

The major objectives of the study elaborated secondary school students' self-efficacy and its relationship with their attitude and achievement in science, the variables used were as follows:

1. Students' self-efficacy
2. Students' attitude towards science
3. Students' achievement in science

Results

RQ 1: What is the difference of students' attitude toward science in male and female students' self-efficacy beliefs?

Table 4.

Difference in Male and Female Students' Self-Efficacy Beliefs

Statements	Male	Female	t	p
1-To what extent do your teachers help you whenever you feel difficulty in school work?	4.68±0.60	4.52±0.70	0.000	2.966
2-How do you express your opinion when your class fellows show difference of opinion in some matter?	4.95±0.94	3.95±0.85	0.015	-0.044

3-How do you keep yourself happy in case of some unpleasant event?	3.53±1.07	3.68±1.10	0.563	-1.817
4-How can you study when your interest lies in other activities?	2.91±1.29	3.13±1.22	0.237	-2.269
5-How do you succeed to calm yourself when you feel fear?	3.87±1.00	3.78±1.04	0.400	1.046
6-To what extent do you make friendship with other children?	4.41±0.83	4.48±0.76	0.230	-1.243
7-To what extent do you prepare for test of a science chapter?	4.64±0.58	4.81±0.39	0.000	-4.315
8-How can you talk in a better way with some stranger?	4.25±0.90	4.33±0.89	0.978	-1.064
9-How can you save yourself from worry in examination of science subjects?	4.10±1.02	4.09±0.94	0.041	0.161
10-To what extent do you get success in homework of science subjects?	4.49±0.73	4.58±0.68	0.128	-1.563
11-How do you work together in cooperation with your class fellows?	4.38±0.79	4.53±0.68	0.003	-2.680
12-To what extent you can control your emotions while reading science subjects?	4.02±1.06	4.20±0.91	0.449	-2.369
13-How much attentive are you in the classroom while reading science subjects?	4.58±0.76	4.76±0.62	0.000	-3.293
14-How do you express your dislike regarding unlikeable activities of your class fellows?	3.24±1.23	3.27±1.20	0.668	-0.261
15-When you are feeling inferior, how you do boosting conversation?	3.62±1.11	3.48±1.12	0.595	1.522
16-How much do you comprehend your science subjects?	4.45±0.81	4.58±0.71	0.012	-2.078
17-How much skilled are you at narrating a comic incident?	4.01±1.08	4.26±0.88	0.133	-3.246
18-How skilfully do you express to your class fellows that you do not like science lectures?	3.40±1.40	3.20±1.46	0.144	1.801

19-How much satisfied do your parents feel regarding your homework?	4.47±0.79	4.56±0.65	0.002	-1.698
20-How much skilled are you at making friends?	4.13±1.01	4.15±1.03	0.530	-0.272
21-How can you be successful in controlling your unpleasant ideas?	3.78±1.05	3.85±0.97	0.073	-0.821
22-To what extents can you pass science tests?	4.48±0.64	4.63±0.49	0.000	-3.266
23-How much skilled are you in defending yourself in case of clash with your class fellows?	3.92±1.14	4.05±0.95	0.002	-1.620

RQ 2: What is the difference of male and female students' achievement score in science subjects?

Table 2

Difference of Male and Female Students' Achievement Score in Science Subjects

Statements	Male	Female	t	p
1-The best usage of wealth is to spend wealth for science.	4.30±0.95	4.32±0.95	0.490	-0.249
2-I would like to decide through experiment, in order to know the reasoning of some happening, instead of asking someone about it.	4.06±1.09	4.40±0.82	0.000	-4.426
3-Science lessons are interesting.	4.61±0.79	4.77±0.55	0.000	-2.964
4-I would not like to become a scientist after getting education.	2.59±1.40	2.68±1.30	0.019	-0.878
5-Science is the worst enemy of mankind.	1.79±1.19	1.39±0.81	0.000	4.916
6-I do not like science subjects.	2.04±1.33	1.59±1.06	0.000	4.705
7-I feel bored while watching science programmes.	2.33±1.45	2.05±1.30	0.000	2.523
8-I would like to work with those who work for new inventions, after getting education.	4.36±1.03	4.37±1.05	0.755	-0.114

9-The amount being spent on science is the right usage of national wealth.	4.12±1.19	4.42±0.93	0.001	-3.566
10-There should be more periods for science subjects in timetable of educational institutions.	4.29±0.96	4.50±0.82	0.003	-2.962
11-I would like to get some science book or scientific equipment as a gift.	4.29±1.07	4.57±0.75	0.000	-3.844

Discussion

1. Self Efficacy of 10th grade science students were positively significant with attitude towards science. Highly self-efficacy students had strong attitude towards science.
2. Female science students of 10th grade had higher self-efficacy than male students.
3. Female science students of 10th grade had more positive attitude towards science than male students.
4. 10th grade science students of urban localities had higher self-efficacy than 10th grade science students of rural localities.
5. 10th grade science students of urban localities had more positive attitude towards science than 10th grade science students of rural localities.
6. 10th grade science students of tehsil Faisalabad had the higher self-efficacy than students of other tehsil Jariwala.
7. The students of tehsils of Jariwala and Faisalabad had more encouraging attitude towards science in case of “Social Implications of Science and Career Interest in Science”. Jariwala students had the lowest attitude in case of “Attitude to Scientific Inquiry” than for other tehsil. On the other hand, for “Classroom Enjoyment and Leisure Interest in Science”, the students of district Faisalabad had the higher attitude.
8. **Relationship of Self Efficacy and Achievement in Science**
9. The present study showed that self-efficacy was positively interrelated with the achievement toward science. The conclusions of this study have determined that self-efficacy of science students of secondary school showed better achievement in the subjects of science. The relationship of self-efficacy with all of the five subjects of science and overall achievement scores ranged from -0.17 to -0.31.
10. The investigation that well-formulated technology instruments can require learning is in line with research accounted on different technology based interactive

knowledge situations (Corderoy, Harper, & Hedberg, 2003; Lajoie, 1993; Cognition & Technology Group at Vanderbilt, 1997).

11. At the end resulted from the overall information that self-efficacy is positively interrelated with the achievement of science students.

Attitude towards Science and Achievement in Science

12. The ending and conclusions of the study repeated the conclusions of some early researches that attitude in science was positively interrelated with the science achievement. The attainment evaluates of all the five subjects of science (Chemistry, Biology, Mathematics, Physics and Computer Science) and also overall achievement assess were positively interrelated with the TOSRA scales.
13. Some other research studies have determined that achievement in science and attitude towards science are highly associated and positively correlated with each other (Dhindsa & Chung, 2003; Eccles, 2007; Ferreira, 2003; House, 1993; Mattern & Schau, 2002; Oliver & Simpson, 1984; Rana, 2002; Simpson & Oliver, 1990; Weinburgh, 1995; and Willson, 1983). The positive attitude of the learners towards science concluded in the higher achievements in science. There was no study explored in which achievement in science and attitude towards science was negatively correlated.
14. Talton and Simpson (1987) applied semester system marks to elaborate achievement and concluded reasonable correlations. These conclusions are reliable and dependable with those of the study. Haladyna and Shaughnessy (1982) also supported the results that the classroom atmosphere and the teacher play a significant role in influencing attitude.
15. According to Oliver & Simpson (1988), these conclusions indicate that attitude toward science and science self-concept are reflected to different way by students with reference to their achievement.
16. According to Cokadar and Kulce (2008), the pupils' attitudes towards science have showed significant differences at all grades with respect to the favourite subject, school attended and perception of self-achievement in three-sub dimensions and with respect to monthly income of the family in the perception of subject and perception of science.

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EFFECT OF SELF-EFFICACY ON STUDENTS' ACHIEVEMENT IN SCIENCE

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ABSTRACT

The study aimed to analyze the effect of self-efficacy on students' achievement in science. The population of the study was consisted of 10th grade science students of govt. secondary and higher secondary schools of district Okara Punjab province. A total of 811 students were selected as a sample from the population. The research tool; Self-Efficacy Questionnaire for Children (SEQ-C) was adapted to use. The data was collected by the researcher himself with the permission of heads of all 24 schools. The process of data collection started in December 2013 and completed in February 2014. The results of the study indicated that female science students had lower self-efficacy than male students.. Furthermore, students of urban localities had higher self-efficacy than students of rural localities. There were no significant differences in self-efficacy on the basis of mother tongues (Punjabi, Urdu and Others).

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INTRODUCTION

Science is an acquaintance apparent by the man through his ambience. Man acquires the information of atmosphere through his sense of touch, hearing, sight and taste. He urbanized his views and approach by that knowledge of surroundings. This knowledge has developed his ways of thinking, doing and acting. He became more civilized and developed by performing in a certain conduct. So Science plays very important role in the civilization of man by exploring various new ways. Now Science has become an important part of man life.

Therefore science has become the essential component of our curriculum at different levels. At secondary level, science is an imperative part of traditional learning. Most of the learners get their formal experiences of science through various structured activities and scientific methods provided by the school curriculum. These actions planned in such a way as to give them some appreciation of scientific concept and they will behave in a certain manner.

Good (1973) expressed that science learning is a field of specialized learning to which amenities, syllabus, and educator learning are related. In (1994) Simpson, Koballa, Oliver and Crawely discussing the relationship among apprentice, science and people. They acknowledged that science learning brings up the all three domains i.e. cognitive, psychomotor and affective by bringing together learns science and society. The cognitive domain deals with the attainment of essentials and notions as well as the maturity of quandary resolving abilities. The psychomotor realm concerns with the maturity of physical abilities and affective realm deals with morals, ideas, benefits and enthusiasm.

Various researches on the interaction between male and female students' achievement in science have conducted by different researchers. According to Bong & Shaalvik (2003) and Pajares (1996) that students' attitude and achievement in scientific discipline usually are favorably and also substantially related. Walberg's theory on educative productiveness identifies seven elements that will promote your variance throughout students' cognitive and also affective results.

Like for example, students' potential, maturation, the caliber of training in addition to quantity of training, their emotional atmosphere in their house, their fellow

party beyond the school room along with the time period associated with video/television mass media (Rana, 2002).

According to Bandura (1997), Self-efficacy is also a factor that is affecting the achievement of science students' in Science. Self-efficacy means peoples' beliefs about their competencies to organize and accomplish the actual plan needed to make given achievements. Their self-efficacy's morals that determine how individuals experience, feel, really encourage themselves in addition to act inside a number of condition or even affair. In many ways person completions and individual welfare are enhanced by the burly intellect of self-efficacy. People with strong beliefs of self-efficacy don't avoid the difficult tasks. They accept difficult tasks as challenges and try hard to master them. Such a kind of self-efficacy fosters intrinsic interest and deep engrossment in activities. They set themselves according to the challenging goals and maintain strong commitment to them. In the case of failure, they never give up rather they heighten and sustain their efforts. They believe that their failure is due to inadequate attempt or lack of awareness and abilities which are acquirable. They believe that they can overcome the threatening situations by their efforts.

Contrary, individuals along with minimal impression of self-efficacy vistas complicated tasks while private risks. They have got minimal dreams along with vulnerable obligations towards targets chosen by simply the crooks to do (Bandura, 1986).

All the above stated investigate work, which particularly swathe the areas of "effect of self-efficacy and achievement in science", were conducted in all over the world. But no attempt had been made to explore the effects of self-efficacy on students' achievement in science students' of district Okara, Pakistan. The present work was first attempt to lighten the topic.

1.1 Statement of the Problem

In order to advance students' achievement in science, a careful indulgent of aspect of self-efficacy and its effect on students' attainment in science was essential, this cram inspected "Effect of Self-Efficacy on Students' Achievement in Science."

1.2 Objectives of the Study

The intentions of this cram were:

- 1) To establish the self-efficacy level of science learners.
- 2) To find out relationship connecting self-efficacy and achievement of students in science.
- 3) To explore the differences of students' self-efficacy in science on the basis of masculinity, vicinity, language and tehsil.
- 4) To inspect the differentiations of learners' achievement on the basis of masculinity, locality, language and tehsil.

1.3 Research Questions

In the light of above mentioned objectives, the following research questions were developed and then investigated in this study:

Research Question # 1

What is the strength of self-efficacy level of 10th grade science students of public schools?

Research Question # 2

Are there differences among learners' self-efficacy and their achievement in science?

Research Question # 3

Will there be relationship among students' self-efficacy as well as their particular success within research?

Research Question # 4

Are there variances inside students' self-efficacy by gender, locality, and language in addition to location?

Research Question # 5

Are there variances in learners' achievement in science on the basis of gender, locality, language and location?

1.4 Significance of the Study

The study is very significant due to following reasons:

- 1 The study is significant for the instructional structure as it may present channel appearances for the course makers to advance the syllabus for up gradation of self-efficacy among learners.
- 2 The course book authors may find direction from this research to write course books which comprise education activities useful to build up self-efficacy.
- 3 The educators may be influenced to center in acclimatizing such educational approaches that widens the self-efficacy along with academic achievements.
- 4 It may build up a support with the instruction faculty to choose improved learning tactic so that they may better realize the learning procedure that transmits to self-efficacy approach.
- 5 The study may get consideration of the instructive evaluation organizations (e.g. B.I.S.E) to integrate ‘‘effect of self-efficacy on students’ achievement in science’’.
- 6 The instrument Self-Efficacy Questionnaire for Children (SEQ-C) has not been broadly used in Pakistan. So, the actual study would required valid along with reliable tool intended for assessing students’ self-efficacy along with achievement in science.
- 7 Achievement throughout science will probably predict students’ menus of future science courses and also affect students’ aspiration to be able to science careers.
- 8 The results of the present study would have significance in the areas of science education, psychology, sociology and guidance etc.

1.5 Delimitations of the Study

The study was delimited to:

- Okara District only;
- Public secondary schools; and
- 10th grade science students taking physics, chemistry, biology/computer science and mathematics as science subjects.

1.6 Assumptions of the Study

The subjects of the present research had to provide data about ‘‘effect of self-efficacy on students’ achievement in science’’. Although the study was delimited to 10th grade science students, yet it was assumed that the students at this level were

mature and had better understanding of self-efficacy, its effect and achievement in science to provide the information.

1.7 Operational Definitions of the Variables

1.7.1 Self-Efficacy

Self-efficacy means peoples beliefs all about its characteristics to be able to organize in addition to perform your own course associated with action required to offer supplied attainments (Bandura, 1997). Dimensions involving Self-Efficacy Inventory are: (a) level as well as magnitude (particular level of career difficulty), (b) strength (certainty involving efficiently performing a great Individual level of job difficulty), as well as (c) generality (the extent to help in which magnitude and strength beliefs generalize across tasks along with situations).

1.7.2 Academic Achievement

“Academic achievement is the extent to which a learner is profiting from instructions in a given area of learning i.e., achievement is reflected by the extent to which skill or knowledge has been imparted to him” (Crow and Crow, 1969)

1.7.3 Achievement in Science

Achievement in science refers to science students’ academic scores obtained in 9th grade Board examinations for the year 2013.

REVIEW OF LITERATURE

Human being wants to train their productions to escort a booming living. This vision might get nearer exact just through learning. The core intention of learning is to formulate learners competent for daily life. So, Self-Efficacy is a vital idea in many public instructive standards. Here it is essential to describe the expression Self-Efficacy.

2.1 Self-Efficacy

Self-efficacy is an impression derived from Bandura’s (1977) open premise of the individual, which lighten that person’s accomplishments depend on the common relations of the person’s performance, individual dynamics (or self), and ecological

situations. Self-efficacy is one of the individual factors and is cleared as “the conviction that one can successfully execute the behavior required to produce the outcomes” (p. 79).

2.1.1 Concepts of Self-Efficacy

Self-efficacy is a impression derived from Bandura’s (1977) open premise of the individual, which lightens that person’s actions depend on the general relations of the person’s performance, individual dynamics (or self), and ecological situations. Self-efficacy is one of the individual factors and is clear that “the conviction that one can successfully execute the behavior required to produce the outcomes” (p. 79).

According to Bandura (1986), “Those who regard themselves as inefficacious shy away from difficult tasks, lower their efforts and give up readily in the face of difficulties dwell on their personal deficiencies lower their aspirations and suffer much anxiety and stress. Such self misgivings undermine performance” (P.395).

Bandura (1997, 1986) expressed that self-efficacy means gained ability of the confident persons which make them successful in the assigned work. The students who have a high degree of self-efficacy have better career opportunities in regard of potentially higher career aspirations without discrimination of gender. Comparisons of students’ objective judgments of their abilities and their self efficacy beliefs, it is obvious that self efficacy beliefs often better indicated their academic successes.

According to Bandura (1986, 1997) and Bandura, Barbaranelli, Caprara, & Pastorelli, (1996) the students raise their self-efficacy who successfully solves the challenging task with little guide line. The highly efficacious students are more likely to choose difficult tasks tried for them longer time applied more effort. Self-efficacy does not remain same; it can vary with time within an individual’s performance. A self efficacious individual knows their abilities to do a task successfully. The judgments of self-efficacy based on the specific domain, so students’ confidence for completing allocated tasks successfully would be assessed by different ways accordingly.

(Bandura, 1997, 1986; Multon, Brown and Lent, 1991) described that Self-efficacy alone predicts better intellectual performance as compared to skills has direct affect on academic performance along with cognition. Self-efficacy influences

memory indirectly. Self-efficacy was found a basic factor to determine individual choices, the exerted efforts, and the persistence of effort in case of difficulties, the thought patterns and emotional responses. Self efficacy beliefs are strongly related to major motivation patterns like self regulation (Zimmerman, 2000, Zimmerman & Bandura, 1994).

According to Smist (1993), for example, in a college population along the course of academic year, chemistry laboratory self-efficacy increased while for the same period biology laboratory self-efficacy decreased. Researchers have found that the students with high level of self-efficacy beliefs tend to perform better than those of low level of self-efficacy beliefs (Jackson, 2002; Lane & Lane, 2001; Parjares, 1996; Pajares, 2003). Self-efficacy can even indicate the carrier choice (Kennedy, 1996; Bandura, 1986; Debacker and Nelson, 1999).

According to Bong & Shaalvik (2003) and Pajares (1996) while self-efficacy totally concerned with task oriented judgment of the student without comparison their capabilities with other students. Self efficacy beliefs have mediated the influence of previous success, knowledge and skill on future coming success (Schunk, 1985).

2.1.2 Science Self-Efficacy

In 1997, Bandura said self-efficacy believes developed the courses partially that accepted by the peoples in their lives. Students firm beliefs that they have the capacity to succeed in science tasks, courses or activities or their self efficacy in science greatly affects their choices of science related activities their efforts, persistence efforts in the face of difficulties and conscience success in science (Britner & Pajares, 2001; Zeldin & Pajares, 2000).

Kennedy (1996) described adapted science experiences, choice of science number of efforts and retention in science is affected by the self-efficacy. Teaching efficacy refers as individual firmed thoughts that they have the abilities to aid the student for learning (Ashton & Webb, 1986).

According to Andre, Whigham, Henbrickson and Chambers (1999), Britner & Pajares (2001), kupermintz (2002) and Lau & Roeser (2002), confidence is one of the factors that greatly affect the students self efficacy in science. Self efficacy beliefs of college level students shows how long they will remain in science related majors and

carrier choices (Gwilliam & Betz, 2001; Lent, Brown & Larkin, 1984; Luzzu, Hasper, Albert, Bibby & Martinelli, 1999).

Kupermintz, Lau & Roeser (2002) described that at high school level students success in science are related to their self efficacy in science and is better indicated for success and involvement inside and outside the classroom in science activities than sex, ethnicity and their parental history. In 1998, Andrew said that in science, self-efficacy may described the selection of course designed that results the under representation of women.

2.2 Factors Affecting Self-Efficacy

Smist, Archambault and Owen (1997) described that aptitude, attitudes and attributions are the factors that determine science self-efficacy. General self-efficacy is determined by the four factors; “inactive mastery experience, vicarious experience, verbal persuasion and psychological and emotional states”. Children’s self-efficacy beliefs become more accurate and persistence along with time and it is difficult to alter them (Bandura 1997).

Borkowski (1985) expressed that transfer of self-efficacy depends upon learning and motivation as it needs agreement to apply skill and approaches along prolonged phases, varying material and different steps. Confidence is one of the factors that greatly affect the students self efficacy in science (Andre, Whigham, Henrickson & Chambers, 1999; Britner & Pajares 2001; kupermintz, 2002; Lau & Roeser, 2002).

According to Ryckman & Peckman (1987), among students from elementary schools gender is a major factor for the success and the failure. Females mostly attained their successes by effort, while males gained successes by ability. Hill (1990) found that middle and high school girls lack interest in science carriers and in science related activities outside of school.

In 1986 and 1997, Bandura described four factors to determine self-efficacy; “enactive mastery experience, vicarious experience, verbal persuasion and psychological and emotional states”. The enactive mastery experience is the most effective one which means persons’ past experiences of success or failure these past

experiences intergraded with him. Individuals' success raises their self-efficacy and failures lower it, which ultimately show them their strength of capability.

In school, children develop cognitive competencies, get knowledge and problem solving skills need to take part effectively in the larger society. In spite of formal instruction many social factors like peer modeling social comparisons motivation by goals positive incentives and teachers interpretations of children's successes and failures are different paths that positively or negatively influence the children's opinion of their intellectual efficacy (Bandura, 1994).

2.3 Self-Efficacy, Self Concept and Self Esteem

2.3.1 Self-Efficacy

In 1991, Schunk described that academic self-efficacy turned as an individual consideration that he has the abilities to achieve allocated task successfully at mastery level. Pajares (1996) within the same domain academic self-efficacy and academic self concept can be replaceable with each other in concepts as both are based on same cognitive erect e.g., self perceived capability. Academic self concept and academic self-efficacy both are bigger differing as they have different effect on learners' inspiration, sensation and study actions (Marsh, Walker & Dubus, 1991).

Bong and Shaalvik (2003) determined the conceptual and operational differences between academic self concept and self-efficacy: Basically academic self concept shows acquired qualities in given field or domain where as academic self-efficacy shows the firm beliefs of an individual to fulfill a certain academic task successfully. According to Marsh (1999) Academic self-efficacy and self concept are measurable up to different level of tasks. As academic self-efficacy generally measures at task specific level while academic self concept measures at more general level with in the same domain.

Pajares (1996) has described related motivational constructs like expected performance self concept, self esteem or locus of control are different from self-efficacy as they are more general self descriptive constructs in cooperated to many forms of self knowledge and self evaluating feelings.

2.3.2 Self-Concept

Self-concept terms as the students observation their mastery skills or required abilities in educational and non-educational (i.e., social, behavioral and ethical) fields and is most suitably denoted by the heading of self perceptions across domains (Harter, 1999).

According to Wigfield and Eccles (2000), in self concept evaluation items students have to judge their competency through specific target and content free information in a given domain and are completely comprised on previous experiences. Whereas, self-efficacy items concern with students future expectancies which make them successful in performing specific academic target.

On the other hand, Bong and Shaalvik (2003) expressed that Self concepts beliefs mainly depend upon societal relative in order and reveal judgment by the other important persons. Students' academic self concept gives not only self judgment direction as well also gives an efficient direction which gives the operational concept by items (Marsh, 1999).

Eccles, Wigfield and Schiefele (1998) expressed while affective and emotional responses emerges by the self judging capability of a person but these responses should not be taken as component of that persons academic self concept. Self concept means a person's overall self perceptions developed by experiences with environment and elucidation of environment. Self awareness hugely affected by the strengthening and evaluations through other person especially (Shavelson & Bows, 1982).

Wigfield and Karpathian (1991) have described that academic self concept is the knowledge and understanding of one's own self under academic outcomes circumstances. Self concept has many directions and consists of self-respect, self-assurance solidity and self-crystallization (Rosenberg & Kaplan, 1982).

According to Harter (1999), Self-concept terms as the students observation their mastery skills or required abilities in educational and non-educational (i.e., social, behavioral and ethical) fields and is most suitably denoted by the heading of self perceptions across domains. Self-esteem is a student's collective judgment of him or herself in addition of when he or she feels happy and satisfaction generally.

Students self concepts develop step by step as they move from middle school to higher school. Adolescents increasing freedom made available for them more chances to take part competitively in the activities and gain more sustain of others as taking more publicly suitable paths with the increase in their perception taking abilities.

Baumeister (2003) expressed that self concept and academic achievement are hugely related to each other, but it seems to be significance relatively than grounds of high attainment. Academic self concept concerns with past experiences and understanding of self, while self-efficacy refers to the upcoming tilting opinions (Bong & Schaalvik, 2003).

2.3.3 Self-Esteem

Usually instructors, supervisors and parents pass on about the students' self-esteem. The importance of self-esteem often embroider to the degree that stumpy self-esteem seen to be the reasons of all vices and that of soaring self esteem result all good (Manning, Bear & Minke, 2006).

According to Harter (1999), self-esteem is a student's collective judgment of him or herself in addition of when he or she feels happy and satisfaction generally. In various activities, self-efficacy plays its role to develop self-esteem (Bandura 1986).

2.4 Self-Efficacy and Achievement

According to Schunk (2008), studies show that self efficacy is positively anticipated the performance achievement in different tasks like mathematics science and reading. A significant relationship can be found between students' self-efficacy beliefs and their academic achievements (Lane & Lane, 2001).

Pintrich (1999) described that self-efficacy beliefs contribute a significant role in achievement influence relate with self regulated learning processes and mediate academic achievement. Students bringing up a sense of self-efficacy for doing well as they work on tasks and made more skillful (Schunk, 1991).

Eccles (1983) and Bandura (1997) expressed that students' previous success is indicated a direct positive influence on students self efficacy and their English achievement outcomes. Past achievement results enhance self-efficacy, students presents success depends upon their attitudes towards past success and failures. Perceived self-efficacy indicates future achievements better than past performance

(Bandura 1986, Tippins 1991, Miller, Greene, Montalvo, Ravindran and Nichols 1996; Chermier and Garcia 2001; and Garcia and Coppola 1993).

Varying degree of self-efficacy may be determined/resulted varying degree of performance for instance; fluctuation in self-efficacy beliefs may change achievement level two same skilled persons or the same individual in two different situations. According to Bandura (1986, 1997) “Those who regard themselves as inefficacious shy away from difficult tasks, low their efforts and give up readily in the face of difficulties dwell on their personal deficiencies lower their aspirations and suffer much anxiety and stress. Such self misgivings undermine performance” (P. 395).

Pajares, (1996) refers that self-efficacy beliefs should be measured at the optimum degree of specificity, especially when study concerns with prediction of achievement. Contrary highly self efficacious person frequently persevere regardless of difficult or odds challenges often succeed. Self-efficacy is found to be indirectly related to the performance; previous achievement inform presently occur self-efficacy expectation that in turn affect task initiation and persistence (Bandura 1986, 1997).

Student’s academic influence and achievements in science, mathematics and language arts domains are relevant to their firm beliefs in their academic abilities (Britner & Pajares, 2001; Lent Brown & Gore, 1997; Shell, Colvin & Bruning, 1995; Pajares 1997).

Eccles (1983, 2000) and Wigfield (2000) described that Students behavior and academic achievements are determined by to major consequents i.e., the extent students firmly believed that they will achieve the given academic task and the extent to which they valuing the given task. Students previous success is indicated a direct positive influence on students self efficacy and their English achievement outcome (Eccles, 1983; Bandura 1997).

Wigfields (1994) presented a theory that students self efficacy may cause a proximal effect on their achievement goals is in accord with Elliot (1999), “Hierearchikl model of achievement motivation”. Elliot model explains that self efficacy could be the one type of self and competence based variables which directly affect the student’s achievements goals, which as a result as a proximal precursor to achievement related processes and feedbacks.

2.5 Self-Efficacy Process

Self-efficacy process is defined by Bandura (1994) as follows:

2.5.1 Sources of self-efficacy

Four main sources are considered to be developed individuals beliefs about self-efficacy.

1. Mastery experiences
2. Vicarious experiences
3. Social persuasion
4. Psychological and emotional states

2.5.2 Efficacy-Activated Process

A number of researchers put forwarded on the four psychological processes which affect human working abilities (Bandura 1994):

1. Cognitive Processes
2. Motivational Processes
3. Affective Processes
4. Selection Processes

2.6 Review of Research Studies on Self-Efficacy and Achievement

Tippins (1991) described that number of studies shows relationship of self-efficacy and academic achievement. For instance, self-efficacy positively related to cognitive engagement and academic achievement in 7th grade science and English classes. In meta-analysis of 39 studies from 1977 to 1988 reveals, significant relationships were present between self-efficacy and performance of high schools and college students than younger students, relatively weak relationships were founded between self-efficacy and performance of younger students than high schools and college students (Multon, Brown and Lent, 1991).

Greene and Miller (1996) expressed about a study on the college students enrolled in educational psychology found having a positive effects in between perceived capacity, goals in addition to purposeful cognitive proposal which affected instructional achievements. Muris (2001) conducted a study which showed that self-efficacy and certain academic and emotional self-efficacy were significantly negatively related to depression. In short, children with low self-efficacy show high level of depression. Girls were affected more than boys.

Liem, Lau and Nie (2008) carried out a work in 1475 individuals to discover the particular position of self-efficacy throughout good results and in addition they located self-efficacy favorably linked using good results. Analysts have realized the individuals using advanced of self-efficacy philosophy often accomplish greater than these of minimal degree of self-efficacy philosophy (Jackson, 2002; Lan & Lane, 2001; Parjares, 1996; Pajares, 2003). Distinct detectives reveal the technique learners formulate use of the training methods promotes his or her instructional successes (Hwang and Vrongistinos 2002; McKenzie, Gow, and Schweitzer 2004; Pressley, Borkowski, and Schneider 1987; Rollnick, Davidowitz, Keane, Bapoo and Magadla; 2008; Yip and Chung 2005).

Multon, Brown and Lent (1991) described that in a meta-analysis of 39 studies, significant interaction were present between self-efficacy and performance of high schools and college students than younger students, relatively weak relationships were founded between self-efficacy and performance of younger students than high schools and college students. Consistently, researchers have found that he students' who try to master the assignment and have the aspiration to attain innovative skills are highly self-efficacious, have positive patterns of learning, and have higher achievement (Middleton & Midgley, 1997; Midgley &Urdan 1995; Pajares, Britner & Valiante, 2000).

A number of researchers have suggested that students firm beliefs that they have the capabilities to achieve the given task are bitterly indicated their academic achievement and motivation (Graham & Weiner, 1996; Pajares, 2003; Pintrich & DeGrout, 1990; Pintrich & Schunk, 1995).

2.7 Self-Efficacy and Gender

According to Smist (1997), male show more positive influence towards carrier in science as compared to females. Among students from elementary schools gender is a major factor for the success and the failure. Females mostly attained their successes by effort, while males gained successes by ability (Ryckman & Peckman, 1987).

Bandura (1986, 1997) expressed that without the discrimination of gender greater carrier opportunities also the potentially higher carrier aspirations for those who have high level of self-efficacy. Different individuals have different efficacy beliefs even vary in the same individual for different tasks. Andrew (1998) said that in science, self-efficacy may described the selection of course designed that results the under representation of women.

Betz & Hackett (1981) and Post-Kammer & Smith (1991) expressed that various studies shown that for typical female occupations females had greater self efficacy to complete educational requirements and job duties. Many researchers have found that negative attitudes and low level of self efficacy are the aspects that partly result persistent under account of woman and minorities in professional occupation (Lent, Brown & Larkin 1986 and Post, Stewart & Smith, 1991).

2.8 Conclusions from the Review of Related Literature

Summarizing the literature review, self-efficacy is an important skill of the life and desired by today's student. Students' self-efficacy in science has significant effects on their achievement in science. Self-efficacy is an impression derived from Bandura's (1977) open premise of the individual, which lightens that person's accomplishments depend on the common relations of the person's performance, individual dynamics (or self), and ecological situations. Self-efficacy is one of the individual factors and is cleared as "the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 79).

Kennedy (1996) described Adapted science experiences, choice of science number of efforts and retention in science is affected by the self-efficacy. Teaching efficacy refers as individual firm thoughts that they have the abilities to aid the student for learning (Ashton & Webb, 1986).

Smist, Archambault and Owen (1997) described that aptitude, attitudes and attributions are the factors that determine science self-efficacy. General self-efficacy is determined by the four factors; inactive mastery experience, vicarious experience, verbal persuasion and psychological and emotional states. Children's self-efficacy beliefs become more accurate and persistence along with time and it is difficult to alter them (Bandura 1997).

According to Schunk (2008), studies show that self efficacy is positively anticipated the performance achievement in different tasks like mathematics science and reading. A significant relationship can be found between students' self-efficacy beliefs and their academic achievements (Lane & Lane, 2001).

In meta-analysis of 39 studies from 1977 to 1988 reveals, significant relationships were present between self-efficacy and performance of high schools and college students than younger students, relatively weak relationships were founded between self-efficacy and performance of younger students than high schools and college students (Multon, Brown and Lent 1991).

Liem et.al. (2008) carried out a work in 1475 individuals to discover the particular position of self-efficacy throughout good results and in addition they located self-efficacy favorably linked using good results. Analysts have realized the individuals using advanced of self-efficacy philosophy often accomplish greater than these of minimal degree of self-efficacy philosophy (Jackson, 2002; Lane & Lane, 2001; Parjares, 1996; Pajares, 2003). Distinct detectives reveal the technique learners formulate use of the training methods promotes his or her instructional successes (Hwang and Vrongistinos 2002; McKenzie, Gow, and Schweitzer 2004; Pressley, Borkowski, and Schneider 1987; Rollnick et al; 2008; Yip and Chung 2005).

MATERIALS AND METHODS

The main function of this study was to explore the result of self-efficacy on students' achievement in science. The variables of this study were self-efficacy and achievement in science. Research methodology for the study is as follow:

3.1 Research Design

This study concerned quantitative statistics investigation and was explanatory in character. One feedback form: “Self-Efficacy Questionnaire for Children SEQ-C” (Muris, 2001) was adapted and utilized in this research. Survey method was used to collect information and associations among variable such as self-efficacy which affected the achievement of science students.

3.3 Population of the Study

The study was consummated to get the effects of self-efficacy on students’ achievement in science along with demographic variables affecting them. Therefore, the population of the study consisted of all 10th grade male and female science learner studying in public secondary and higher secondary schools in district Okara of Punjab province. These students were studying Physics, Chemistry, Biology/ Computer science and Mathematics as science subjects at secondary level.

Following were the grounds for choosing 10th grade science students as population of the study:

- Secondary level is the mainly vital period during the studious period of students as this phase escorts them towards their prospect studios as well as certified profession (Govt. of Pakistan, 1998).
- Further, learners at 10th grade are fully developed and they have new connections with the discipline of science than scholars at middle stage (Govt. of Pakistan, 1998).
- It was assumed that 10th grade science students have urbanized more self-efficacy in science than students at middle stage. So they were in superior situation to answer to the tool of self-efficacy and its effect on student’s achievement in science.

3.4 Sample of the Study

There are 3 tehsils in district Okara of Punjab province and 180 public secondary and higher secondary schools are present in these 3 tehsils (www.schools.punjab.gov.pk). It was very complicated to gather information from such a hefty population. So, sample was chosen from this population. For the rationale of sample choice, multistage procedure was used. This method is broadly used in the world. According to Tashakkori and Teddlie (2003), since it involves “selecting a relatively large number of units from a population, or from specific subgroups (strata) of a population, in a random manner where the probability of inclusion of every member of the population is determinable” (p. 713).

The following steps were adopted for the sample selection:

1. Three tehsils of district Okara (Okara, Renla Khurd, and Depalpur) were chosen.
2. Each tehsil was at odds into two stratum on the basis of locality i.e., urban and rural schools.
3. Each echelon was further subdivided into two substrata on the basis of gender i.e., male and female schools.
4. Two schools were selected arbitrarily from each substratum in the tehsil of Okara, Renala Khurd and Depalpur due to huge population. All of these schools were included in the sample. Total number of schools selected for the sample of the study were 24 (08 from each tehsil).
5. One science class was selected randomly from each school.
6. The students integrated in illustration were appearing in Secondary School Certificate Examination 2013 of Board of Intermediate & Secondary Education Sahiwal in Punjab province.

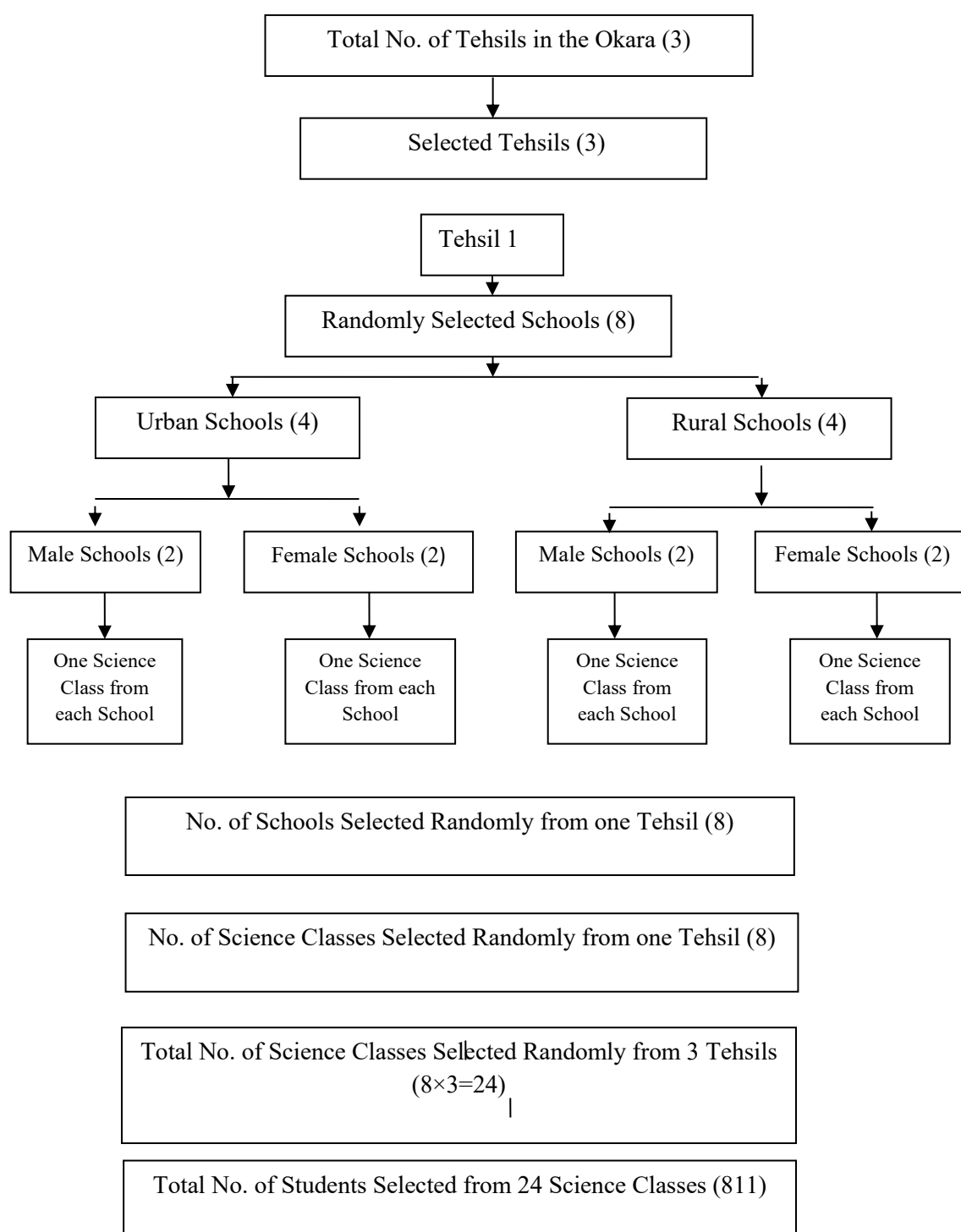


Diagram 3.1 *Selection of Sample for the Study*

3.4.1 Distribution of Schools on the Basis of Gender & Locality

Table 3.1 below clarifies the sorting of schools on the basis of gender and locality.

Table 3.1

Allocation of Schools on the Basis of gender & locality

Sr. No.	District	Tehsil	Schools				Total
			Urban		Rural		
			Male	Female	Male	Female	
1	Okara	Okara	2	2	2	2	8
2	Okara	Renala	2	2	2	2	8
3	Okara	Depalpur	2	2	2	2	8
Total			6	6	6	6	24

3.4.2 Distribution of Students on the Basis of Gender and Locality

Table 3.2 below clarifies the organization of students on the basis of gender and locality.

Table 3.2

Allocation of Students on the Basis of sex and area

Sr. No.	Tehsils	Students				Total
		Urban		Rural		
		Male	Female	Male	Female	
1	Okara	80	60	67	55	262
2	Renala	60	80	65	50	255
3	Depalpur	80	79	65	70	294
Total		220	219	197	175	811

It is indicated from the Table 3.2 that total number of students selected for the sample were 811. Among these 811 students, 220 male students were selected from urban areas and 197 from rural areas. Similarly, 219 female students were selected from urban areas and 175 from rural areas. The highest number of students (294 students) was selected from tehsil Okara and the lowest number of students (255 students) was selected from tehsil renala.

3.5 Research Instruments for the Study

As already explained, the foremost intention of the study was to probe the effect of self-efficacy on students' achievement in science, the following information were required:

1. Students' self-efficacy
2. Students' achievement in science
3. Demographic information i.e., gender, locality, name of tehsil and language.

In order to evaluate students' self-efficacy, the modified and interpreted edition of Self-Efficacy Questionnaire for Children (SEQ-C) was used (section 3.5.1). This instrument is attached as Appendices.

3.5.1 Self-Efficacy Questionnaire for Children (SEQ-C)

Self-Efficacy Questionnaire for Children (SEQ-C) was used to judge students' self-efficacy in the current study.

3.5.1.1 Validation for the Selection of SEQ-C

The instrument SEQ-C (Muris, 2001) was used in the present study to quantify 10th grade students' self-efficacy. This instrument was selected due to following reasons:

1. According to Muris (2001), factor analysis of the SEQ-C exposed three dynamics that were in observance with the projected subscales: "social self-efficacy, academic self-efficacy, and emotional self-efficacy".
2. The internal consistency reliability of the SEQ-C was adequate (Muris, 2001).

3.5.1.2 Introduction and Background of SEQ-C

According to Muris (2001), the development of SEQ-C was based on three goals. These goals were edifice of a concise and self-report scale and the service of factor analytic measures for the measurement of "Academic self-efficacy, Social self-efficacy and Emotional self-efficacy" subscales. *Self-Efficacy Questionnaire for children* is a self-report instrument.

The particular Self-Efficacy Questionnaire with regard to Young children SEQ-C (Muris 2001) contains twenty-four products which might be invested in a few areas of self-efficacy: (1) cultural self-efficacy (2) school self-efficacy as well as (3) over emotional self-efficacy. Every single item must be have scored on the 5-point size when i. age. 1 = not at all, 2=Not, 3=Sometimes, 4=Well, 5 = very well.

The reliability values of alpha coefficient for subscales of original version of *Self-Efficacy Questionnaire for Children* were: 0.88 for the total scale, 0.85 for social self-efficacy, 0.88 for academic self-efficacy, and 0.86 for emotional self-efficacy.

3.5.1.3 Development of Urdu Version of SEQ-C

In the current study, the *Self-Efficacy Questionnaire for Children* (SEQ-C; Muris 2001) was used with the written consent of the developer of this instrument Dr. Peter Muris, Department of Medical, Clinical, and Experimental Psychology, Maastricht University, Maastricht, The Netherlands.

Self-Efficacy Questionnaire for Children (SEQ-C was translated into Urdu language by three language and content experts under the supervision of Dr. Muhammad Shabbir Ali (supervisor of the present thesis). These translations were measured up to each other. On the basis of this judgment, common points were taken out and Urdu version of *Self-Efficacy Questionnaire for Children* was developed. Then this Urdu version of SEQ-C was reviewed by another specialist for confirmation that true content matter had been translated. The names of experts are given in the list which is attached as Appendix-F.

After obtaining the authorization of supervisor and expert, the Urdu translated version was used for pilot study. This Urdu version of *Self-Efficacy Questionnaire for Children* is attached as Appendix-B

The numbers of statements in each subscale of *Self-Efficacy Questionnaire for Children* are presented in Table 3.3 as below:

Table 3.3

Number of Statements in each Subscale of SEQ-C

SEQ-C Subscales	Number of Statements	Serial Number of Statements in Pilot Test of 24 Items
SEQ-C –Emotional	8	3, 5, 9, 12, 15, 18, 21, 24
SEQ-C –Social	8	2, 6, 8, 11, 14, 17, 20, 23
SEQ-C –Total	8	1, 4, 7, 10, 13, 16, 19, 22

3.5.1.4 Pilot Testing of *Self-Efficacy Questionnaire for Children*

The translated version of SEQ-C into Urdu language was pilot tested in November 2013 on 150 tenth grade science students of public secondary schools in district Okara. These students were studying Physics, Chemistry, Biology/Computer Science and Mathematics as science subjects. These students were selected from five different schools. These five schools were selected suitably. From each school, 30 students were selected arbitrarily. The names of these schools are:

1. Govt. Model Girls High School, Okara.
2. Govt. Girls High School ¼-L, Okara.
3. Govt. Boys High School ¼-L, Okara.
4. Govt. High School 25/ 2-R, Okara.
5. Govt. C.M.R High School, Okara.

The selected students from above mentioned schools were asked to fill the Urdu translated version of *Self-Efficacy Questionnaire for Children (SEQ-C)*. For pilot testing, the reliability coefficient of *Self-Efficacy Questionnaire for Children (SEQ-C)* was determined by calculating Cronbach Alpha Reliability Coefficient. This value was found $\alpha = .831$. Table 3.4 below shows the mean, standard deviation, and reliability coefficient values of the pilot test.

Table 3.4

Mean, Standard Deviation, and Reliability Coefficient on Self-Efficacy Questionnaire for Children (SEQ-C)

Mean	Standard Deviation	Cronbach Alpha Reliability Coefficient
42.5906	10.0854	.831

The reliability coefficients were also calculated for each subscale of *Self-Efficacy Questionnaire for Children (SEQ-C)* which are given in Table 3.5 as below:

Table 3.5

Reliability Coefficients for Subscales of Self-Efficacy Questionnaire for Children (SEQ-C)

SEQ-C Subscales	Number of Statements	Alpha Reliability Coefficient
SEQ-C –Emotional	8	0.559
SEQ-C –Social	8	0.799
SEQ-C –Total	8	0.618

Item analysis was performed after pilot testing. Dunn-Rankin (1983) has described the procedure of item analysis as:

“The mean score of each individual item represents item difficulty for the particular item. The pearson ‘r’ of each item with the total score on all items (referred as Item-to-Total Correlation) act as a discrimination index for each item. If the item correlates highly with the total score, it is internally consistent and it should be retained. If a zero or very low correlation coefficient is obtained, it is not discriminating between groups and should be deleted.”

The above described criteria were used for item analysis in this study.

Table 3.6 below represents the item statistics and the values of discrimination index for the urdu version of self-efficacy questionnaire for children (SEQ-C)

Table 3.6

Item Statistics and Item-Total Correlations

Item Number	Mean (Difficulty Index)	Item-Total Correlation (Discrimination Index)
SE 1	2.79	0.387
SE 2	1.25	-0.066
SE 3	1.17	-0.023
SE 4	1.58	-0.029
SE 5	1.76	-0.023
SE 6	2.83	0.381
SE 7	2.79	0.406
SE 8	3.29	-0.056
SE 9	2.29	0.531
SE 10	1.25	-0.037
SE 11	2.17	0.458
SE 12	2.49	0.393
SE 13	3.21	-0.049
SE 14	1.51	-0.023
SE 15	2.29	-0.651
SE 16	2.41	0.590
SE 17	2.56	0.312
SE 18	2.89	0.393
SE 19	2.25	0.446
SE 20	2.56	0.312
SE 21	2.76	0.363
SE 22	2.86	0.383
SE 23	2.58	0.407
SE 24	2.96	0.391

On the basis of values given in Table 3.6, item number 2, 3,4,5,8,10,13,14 and 15 were rejected and deleted from the SEQ-C. Remaining 15 items were retained in the final questionnaire.

3.5.1.5 Development of Final Instrument of SEQ-C

The final questionnaire of SEQ-C consisted of 15 items instead of 24. This 15-item questionnaire was used for the data collection of the present study (The *Self-Efficacy Questionnaire for Children (SEQ-C)* used for final study is attached as Appendix-C). The Alpha reliability value for the final *Self-Efficacy Questionnaire for Children (SEQ-C)* was $\alpha = 0.91$.

Table 3.7 below shows the number of items, serial number of items retained in the final questionnaire and the Alpha reliability values of each subscale of *Self-Efficacy Questionnaire for Children (SEQ-C)*.

Table 3.7

Items and the Reliability Coefficients of Final Self-Efficacy Questionnaire for Children (SEQ-C)

SEQ Sub Scales	Number of Items	Serial Number of Statements in Final Test	Alpha Reliability Coefficient
SEQ-C -Emotional	5	9,12,18,21,24	0.648
SEQ-C -Social	5	6,11,17,20,23	0.799
SEQ-C –Academic	5	1,7,16,19,22	0.785

Achievement Scores in Science Subjects

This students' accomplishment in scientific discipline seemed to be a primarily based varied from the present review. This individuals involving tenth class open supplementary educational institutions had previously made an appearance in ninth class B.I.S.E result session 2013. The 9th class Board results of these students in the subjects of Physics,

Chemistry, Biology and Mathematics were obtained from the Board of Intermediate and Secondary Education, Sahiwal for the district of Okara.

3.5.2 Demographic Variable Information Performa

The information of the subjects of the study related to demographic variables was collected through a Performa named “Demographic Variable Information Performa.” This Performa consists of following information:

- Name and Father’s Name;
- Father’s education and profession;
- Mother’s education and profession;
- Annual income;
- Gender of Students;
- Locality of the School;
- Language Spoken at Home; and
- Roll Number for the Previous 9th Class Board Examination.

(Demographic Variable Information Proforma is attached as Appendix-A).

3.6 Administration of the Instrument

The *Self-Efficacy Questionnaire for Children (SEQ-C)* along with Demographic Information Proforma were administered on 811 students selected from 24 schools of three tehsils (Okara, Renal Khurd, and Depalpur). The data was collected by the researcher himself with the permission of heads of all 24 schools. The process of data collection started in December 2013 and completed in February 2014.

Before the administration of the questionnaire, the students were briefly explained the purpose of the research and procedure to respond to the questionnaires. The students were made sure that all the information obtained would be used for the research purpose only.

3.7 Scoring Procedures

The data collected from science students was scored by following methods:

1. *Self-Efficacy Questionnaire for Children (SEQ-C)* consisted of statements on Likert type scale. The scores assigned to positive and negative statements of *Self-Efficacy Questionnaire for Children (SEQ-C)* are presented in Table 3.8 as below:

Table 3.8

Scoring Procedure for Self-Efficacy Questionnaire for Children (SEQ-C)

Positive Statements		Negative Statements	
Category	Scores	Category	Scores
Very well	5	Very well	1
Well	4	Well	2
Sometimes	3	Sometimes	3
Not	2	Not	4
Not at all	1	Not at all	5

2. The scoring procedures for demographic variables (Gender, Locality, Language and Tehsils) are presented in following tables:

Table 3.9 below presents the scoring procedure for gender of 10th grade science students included in the present study.

Table 3.9

Scoring Procedure for Gender

Gender	Score
Male	1
Female	2

Table 3.10 below presents the scoring procedure for locality of 10th grade science students included in the study.

Table 3.10

Scoring Procedure for Locality

Locality	Score
Urban	1
Rural	2

Table 3.11 below presents the scoring procedure for language of 10th grade science students included in the study.

Table 3.11

Scoring Procedure for Mother Tongue

Language	Score
Punjabi	1
Urdu	2
Others	3

Table 3.12 below presents the scoring procedure for tehsils of 10th grade science students included in the study.

Table 3.12: *Scoring Procedure for Tehsils*

Tehsils	Score
Okara	1
Renla Khurd	2
Depalpur	3

3. Achievement refers to students' achievement scores obtained in 9th class Board examinations in the subjects of Physics, Chemistry, Biology/Computer Science and Mathematics. The achievement scores of the students obtained in these four subjects as well as sum total of these scores were included in the scoring procedure.

3.8 Data Analysis

After the entry of data, it was analyzed by Statistical Package for Social Sciences (SPSS) version 20. The analysis of data was completed under the supervision of Dr. Muhammad Shabbir Ali (Assistant Professor), Education Department, Government College University, Faisalabad. The data analysis started in March 2014 and completed in May 2014.

For the pilot study of instrument, Cronbach Alpha Reliability Coefficient was used. Similarity Difficulty index and Discrimination index were also used for the deletion of some items. Descriptive statistics i.e. Mean, Standard Deviation and Frequency Distributions were used for the description of trends in the data. Values of Chi Square were used to find out the relationship and ANOVA was used to find out differences.

3.9 Chapter Summary

The research design for the present study was Causal-Comparative using quantitative research methodology. The population of the study comprised of 10th grade science students of public secondary and higher secondary schools in district Okara, Punjab province. 811 students were selected in the sample from 24 schools situated in 3 tehsils of district Okara, Punjab. Both male and female students were selected as sample on the basis of locality (urban and rural).

The data was collected by administering one instrument: Self-Efficacy Questioner for Children (SEQ-C). Self-Efficacy Questioner for Children (SEQ-C) was used to measure students' self-efficacy and its effect on their achievement in science. The adapted and translated version of SEQ-C was pilot tested and validated for the present research study. Students' achievement scores in science subjects were obtained from their results of 9th class Board examinations. Some demographic information was also obtained.

The data obtained from 811 students were analyzed by Statistical Package for Social Sciences (SPSS) version 20. For the pilot study of instrument, Cronbach Alpha Reliability Coefficient was used. Similarity Difficulty index and Discrimination index were also used for

the deletion of some items. Descriptive statistics i.e. Mean, Standard Deviation and Frequency Distributions were used for the description of trends in the data. Values of Chi Square were used to find out the relationship and ANOVA was used to find out differences.

RESULTS AND DISCUSSIONS

The main focus of the present study was to investigate the self-efficacy and its effect on students' achievement in science. In the present study, the relationships among self-efficacy and achievement in science were explored. This chapter is mainly divided into two parts.

Part-I provides the descriptive information about the subjects of the study. Part-II provides the answers to research questions for the present study.

Part I

4.1 Descriptive statistics about the Subjects of the Study

This part of the study describes an overview of the data regarding the descriptive statistics.

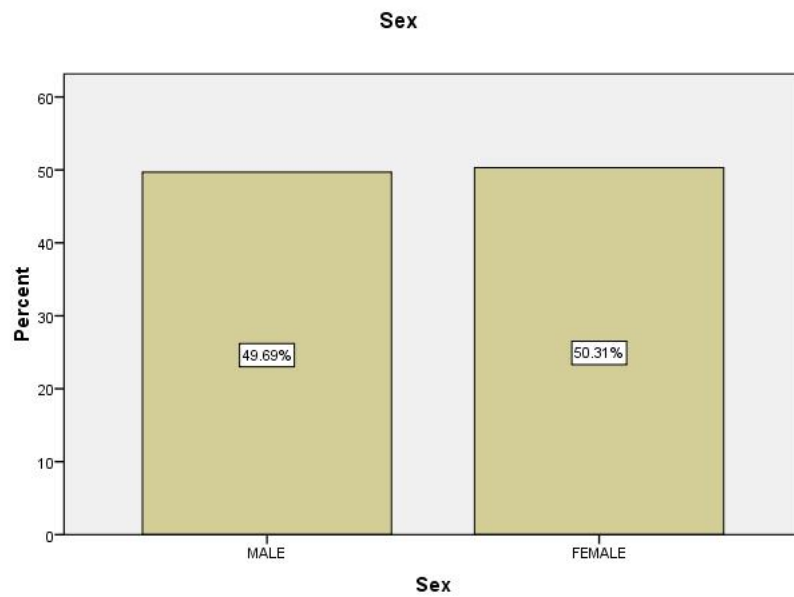
Demographic Information

Table 4.1 shows the classification of subjects by gender.

Table 4.1: *Classification of Subjects by Gender*

Gender	N	Percentage
Male	403	49.3
Female	408	50.7
Total	811	100

The table 4.1 indicates that percentage of male students (49.3 %) was lower than that of female students (50.7 %).



Classification of subjects by locality is presented in Table 4.2 given below.

Table 4.2: *Classification of Subjects by Locality*

Locality	N	Percentage
Okara	263	32.4
Renala Khurd	257	31.7
Depalpur	291	35.9

According to table 4.2, the greater number of subjects i.e. 291 (35.9 %) belonged to Tehsil Depalpur, while the smaller number of subjects were from Tehsil Renala Khurd i.e. 257 (31.7 %).

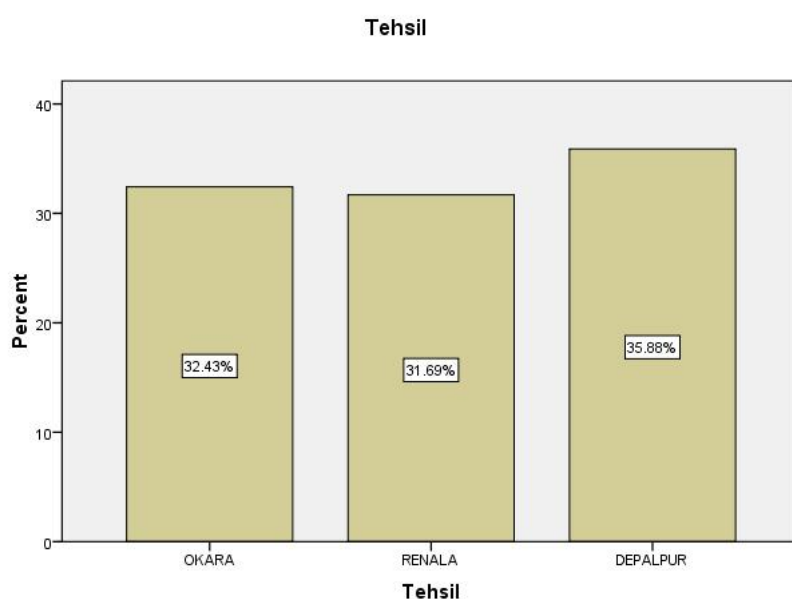


Table 4.3: *Classification of Respondents with respect to Father Education*

		Father Education	N	Percentage	
Table	the of father respondents. It the highest subjects Educational (22.3 %). On the lower respondents (9.1%) whom education was	Primary	139	17.1	4.3 explains classification education of was found that numbers of belongs to FA level i.e.181 the other hand, number of was only 74 fathers' MA.
		Middle	94	11.6	
		Matric	125	15.4	
		F.A	181	22.3	
		B.A	87	10.7	
		M.A	74	9.1	
		Other	111	13.7	
		Total	811	100	

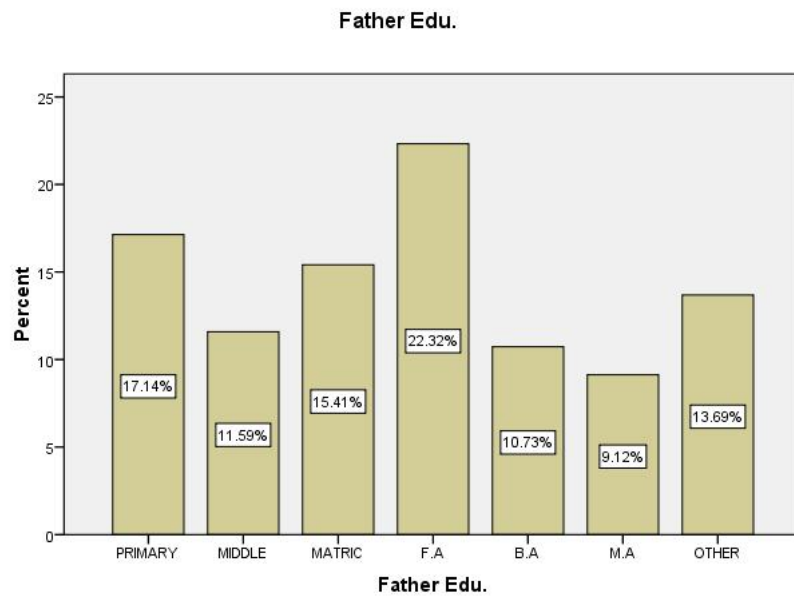


Table 4.4: *Classification of Father Profession*

Father Profession	N	Percentage
Agriculture	189	23.3
Business	258	31.8
GovtEmpolyee	179	22.1
Doctor	40	4.9
Others	145	17.9
Total	811	100

Table 4.4 explains the classification of fathers' profession of respondents. It is expressed that the most of the respondents belonged to such families whose fathers were businessmen (31.8 %) and the least number of parents belonged to employees (4.9 %).

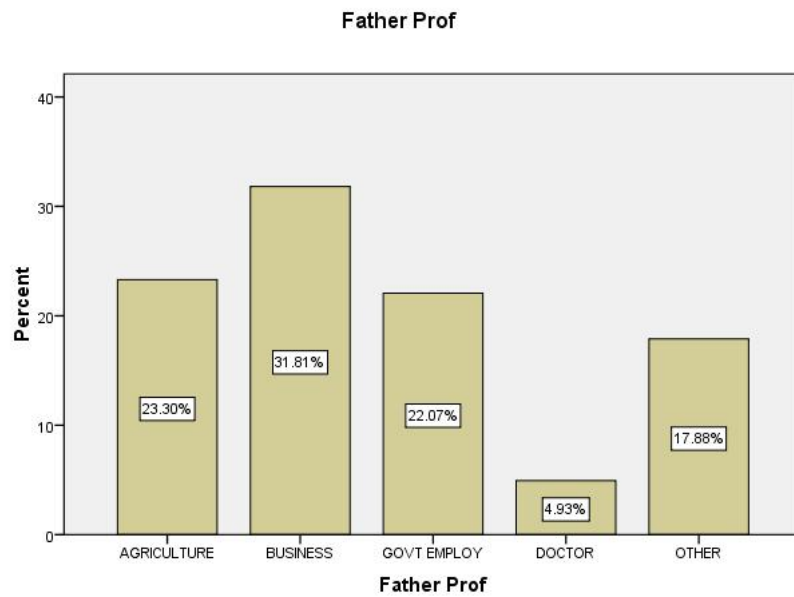


Table 4.5: *Classification of Mother Education*

Qualification	N	Percentage
Primary	128	15.8
Middle	131	16.2
Matric	267	32.9
F.A	158	19.5
B.A	74	09.1
Other	53	6.5
Total	811	100

Table 4.5 explains the classification of respondents with respects to mothers' education. It is expressed that the most respondents belonged to category whom mothers were only Matric i.e. 267 (32.9%). Least number of respondents were only 53 (6.5%).

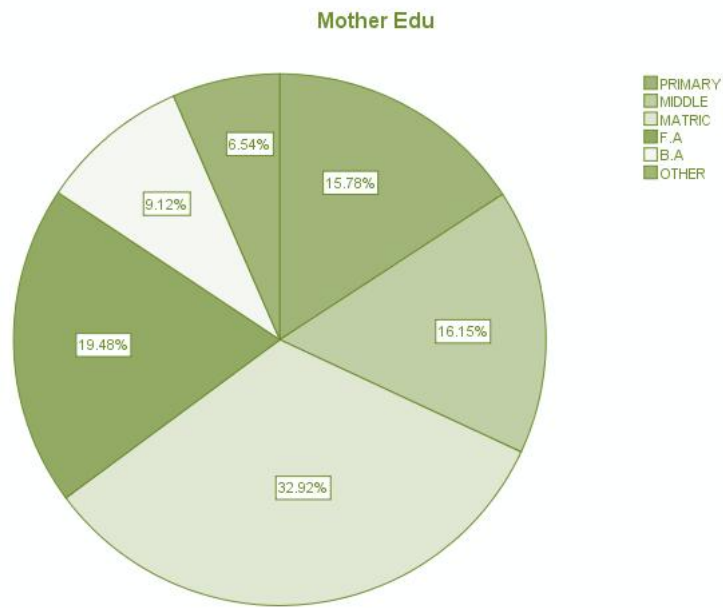


Table 4.6: *Classification of Mother Profession*

Profession	N	Percentage
House wife	549	67.7
Employee	74	9.1
Other	188	23.2
Total	811	100

Table 4.6 explains the classification of mothers' profession of the respondents. It is expressed that the most of the respondents belonged to such families whose mothers were house wives i.e. 549 (67.7 %) and the least number of parents belonged to employees.

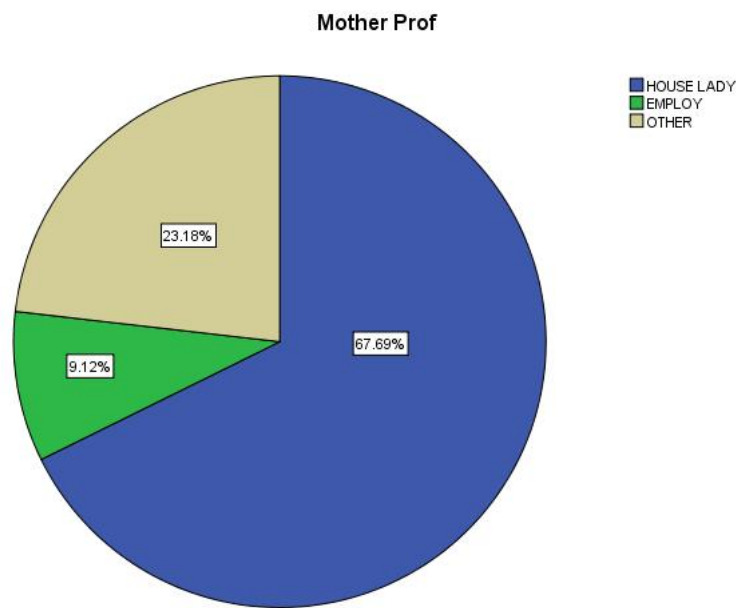
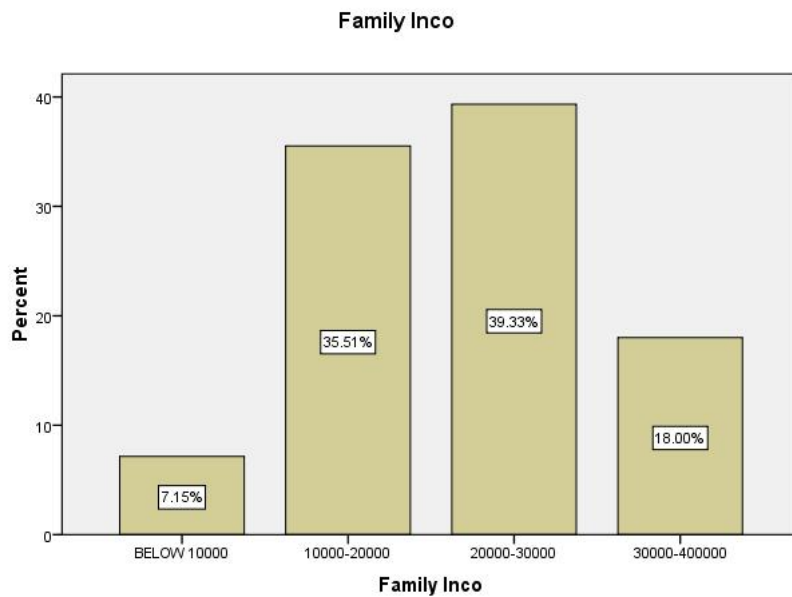


Table 4.7: *Classification of Family with respect to Income*

Income	N	Percentage
Below 10000	58	7.2
10000-20000	288	35.5
20000-30000	319	39.3
30000-40000	146	18.0
Total	811	100

Table 4.7 explains the classification of family with respect to income. It is expressed that the large number of respondents belonged income range (20000-30000) having percentage 39.3. On the other hand, the least number of respondents belonged to income range (below 10000) having percentage of 7.2 only.



Part II: Analysis

This part of the study concentrates on the research questions of the present study through analyzing the data collected from 10th grade science students.

4.2 Relationship of Gender with Academic Self Efficacy

Analysis regarding Relationship of Gender with Academic Self Efficacy discussed in this part of the study.

Q. 1. I get teachers to help me when I get stuck on schoolwork?

Table 4.8: Teacher Help on School Work with Respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	0	0	17	35	351	47.483	.000**
	%	49.7	0	0	2.1	4.3	43.3		
Female	F	408	0	0	1	2	405		
	%	50.3	0	0	.1	.2	49.9		
Total	F	811	0	0	18	37	756		
	%	100	0	0	2.2	4.6	93.2		

**p<.01, *P<.05 *df= 4, χ^2 at 0.05 level = 9.488

Table 4.8 shows the results about the help of teachers to students regarding the school work. The results showed significant relationship. On the basis of p-value (.000) between the genders. Most of the respondents told that they do their school work without the help of teachers. Responses show that male students do their homework independently when compared with female students. Hence female students need more help than male students.

Q. 2. I study a chapter for a test?

Table 4.9: Relationship of Gender with respect to Study

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	1	2	13	48	339	67.252	.000**
	%	49.7	.1	.2	1.6	5.9	41.8		
Female	F	408	0	0	0	1	407		
	%	50.3	0	0	0	.1	52.2		
Total	F	811	1	2	13	49	746		
	%	100	.1	.2	1.6	6	92.0		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.9 explains the results about the preparation for the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents told that they do not prepare for their test. Responses show that male students were more careless when compared with female students. Hence female students prepare their tests well than male students.

Q. 3.I succeed in passing all subjects?

Table 4.10: Relationship of Gender with Respect to Success

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	0	132	19	62	190	104.628	.000**
	%	49.7	0	16.3	2.3	7.6	23.4		
Female	F	408	0	229	1	0	178		
	%	50.3	0	28.2	.1	0	21.9		
Total	F	811	0	361	20	62	368		

% 100 0 44.5 2.5 7.6 15.4

**p<.01, *P<.05 *df= 4, χ^2 at 0.05 level = 9.488

Table 4.10 indicates the results about the success of passing the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents told that they do not succeed in their test. Responses show that male students face more failure when compared with female students. Hence on the basis of results more female students pass through the exams than male students.

Q. 4. I succeed in satisfying my parents with my schoolwork?

Table: 4.11 Satisfaction of Parents with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	2	2	20	305	74	106.531	.000**
	%	49.7	.2	.2	2.5	37.6	9.1		
Female	F	408	0	0	0	406	2		
	%	50.3	0	0	0	50.1	.2		
Total	F	811	2	2	20	711	76		
	%	100	.2	.2	2.5	87.7	9.4		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.11 shows the results about the satisfaction of parents with respect to school work. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not satisfy their parents regarding the school work. Responses show the ratio of female students is higher than that of male students in the school work activities. Hence female students showed more laziness in school work than male students.

Q. 5. I succeed in passing a test?

Table 4.12: Relationship of Passing the Test with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	2	2	29	54	316		
	%	49.7	.2	.2	3.6	6.7	39		

Female	F	408	0	0	1	0	407		.000**
	%	50.3	0	0	.1	0	50.2	95.560	
Total	F	811	2	2	30	54	723		
	%	100	.2	.2	3.7	6.7	89.1		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.12 explains the results about the success in passing the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not able to succeed in the exams. Responses show the ratio of female students is higher than that of male students in not passing the test. Hence female students showed more laziness during the test than male students.

4.3 Relationship of Gender with Social Self Efficacy

Analysis regarding Relationship of Gender with Social Self Efficacy is described in this part of the study.

Q. 6.I become friends with other children?

Table 4.13: Friendship of Students with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	1	4	17	309	72		
	%	49.7	.1	.5	2.1	38.1	8.9		
Female	F	408	0	0	0	407	1	104.441	.000**
	%	50.3	0	0	0	50.2	.1		
Total	F	811	1	4	17	716	73		
	%	100	.1	.5	2.1	88.3	9		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.13 indicates the results about the friendship among students. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not able to make friends. Responses show the ratio of female students is

higher than that of male students with respect to friendship. Hence female students showed more laziness in making friends than male students.

Q. 7. I work in harmony with my class mates?

Table 4.14: *Harmony among Students with respect to Gender*

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	6	5	23	52	317	91.171	.000**
	%	49.7	.7	.6	2.8	6.4	39.1		
Female	F	408	0	0	1	1	406		
	%	50.3	0	0	.1	.1	50.1		
Total	F	811	6	5	24	53	723		
	%	100	.7	.6	3	6.5	89.1		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.14 explains the results about the harmony among students. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not show harmony with friends. Responses show the ratio of female students is higher than that of male students with respect to harmony. Hence female students showed more laziness with respect to harmony than male students.

Q. 8. I tell a funny event to a group of children?

Table 4.15: *Sharing of Funny Events to friends with respect to Gender*

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	8	11	275	48	61	144.481	.000**
	%	49.7	1	1.4	33.9	5.9	7.5		
Female	F	408	0	1	405	2	0		
	%	50.3	0	.1	49.9	.2	0		
Total	F	811	8	12	680	50	61		
	%	100	1	1.5	83.8	6.2	7.5		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

In the above table 4.15 it is indicated that the results about the sharing of stories with friends. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not share stories with friends. Responses show the ratio of female students is higher than that of male students with respect to become isolation. Hence female students showed more isolation than male students.

Q. 9.I succeed in staying friends with other children?

Table 4.16: Success of Staying with other Children with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	7	2	21	325	48	81.211	.000**
	%	49.7	.9	.2	2.6	40.1	5.9		
Female	F	408	0	0	1	406	1		
	%	50.3	0	0	.1	50.1	.1		
Total	F	811	7	2	22	731	49		
	%	100	.9	.2	2.7	90.1	6		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.16 shows the results about to remain friends with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not make friends. Responses show the ratio of female students is higher than that of male students with respect friendship. Hence female students showed more isolation than male students.

Q. 10. I succeed in preventing quarrels with other children?

Table 4.17: Preventing Quarrels with other Children with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	15	10	29	314	35	92.565	.000**
	%	49.7	1.8	1.2	3.6	38.7	4.3		
Female	F	408	2	0	1	405	0		
	%	50.3	.2	0	.1	49.9	0		
Total	F	811	17	10	30	719	35		

% 100 2.1 1.2 3.7 88.7 4.3

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.17 explains the results about to quarrels with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not refrain from quarreling. Responses show the ratio of female students is higher than that of male students with respect quarrel. Hence female students showed more aggression than male students.

4.4 Relationship of Gender with Emotional Self Efficacy

Analysis regarding Relationship of Gender with Emotional Self Efficacy is described in this part of the study.

Q. 11. I prevent to become nervous?

Table 4.18: Prevention from Nervousness with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	2	6	39	74	282	134.778	.000**
	%	49.7	.2	.7	4.8	9.1	34.8		
Female	F	408	0	1	0	2	405		
	%	50.3	0	.1	0	.2	49.9		
Total	F	811	2	7	39	76	687		
	%	100	.2	.9	4.8	9.4	84.7		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.18 explains the results about the prevention of nervousness. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents become nervous. Responses show the ratio of female students is higher than that of male students with respect nervousness. Hence female students showed more anxiety than male students.

Q. 12. I control my feelings?

Table 4.19: Control of Feelings with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	5	8	154	186	50	78.595	.000**
	%	49.7	.6	1	19	22.9	6.2		
Female	F	408	0	0	231	177	0		
	%	50.3	0	0	28.5	21.8	0		
Total	F	811	5	8	385	363	50		
	%	100	.6	1	47.5	44.8	6.2		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.19 indicates the results about to control the feelings. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents unable to control their feelings. Responses show the ratio of male students is higher than that of female students with respect to control of feelings. Hence male students showed more violence than male students.

Q. 13. I tell a friend that I don't feel well?

Table 4.20: Sharing with Friend about feeling with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	18	21	157	173	34	79.414	.000**
	%	49.7	2.2	2.6	19.4	21.3	4.2		
Female	F	408	0	1	177	230	0		
	%	50.3	0	.1	21.8	28.4	0		
Total	F	811	18	22	334	403	34		
	%	100	2.2	2.7	41.2	49.7	4.2		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.20 shows the results about to feelings of frustration. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents share their feelings with friends. Responses show the ratio of female students is

higher than that of male students with respect feeling share. Hence female students share their feelings more freely than male students.

Q. 14. I succeed in suppressing unpleasant thoughts?

Table 4.21: Success in Suppressing Unpleasant thoughts with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	6	10	172	179	36	54.506	.000**
	%	49.7	.7	1.2	21.2	22.1	4.4		
Female	F	408	0	0	229	177	2		
	%	50.3	0	0	28.2	21.8	.2		
Total	F	811	6	10	401	356	38		
	%	100	.7	1.2	49.4	43.9	4.7		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

In the above table 4.21 it is indicated that the results about to suppressing unpleasant thoughts with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not suppressing unpleasant thoughtsfriends. Responses show the ratio of female and male students suppressing unpleasant thoughts is almost same.

Q. 15. I succeed in not worrying about things that might happen?

Table 4.22: Success in not Worrying about things with respect to Gender

		N	NA	N	ST	W	VW	χ^2	P-val
Male	F	403	10	13	50	305	25	106.685	.000**
	%	49.7	1.2	1.6	6.2	37.6	3.1		
Female	F	408	0	1	1	406	0		
	%	50.3	0	.1	.1	50.1	0		
Total	F	811	10	14	51	711	25		
	%	100	1.2	1.7	6.3	87.7	3.1		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.22 shows the results about to mind the things that happen. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents worry about difference incidents. Responses show the ratio of female students is higher than male students who worry about different incidents.

4.5 Relationship of Location with Academic Self Efficacy

Analysis regarding Relationship of Location with Academic Self Efficacy is discussed in this part of the study.

Q. 1. I get teachers to help you when you get stuck on schoolwork?

Table 4.23: Help of Teacher in Schoolwork with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	0	0	13	24	394	4.993	.082
	%	53.1	0	0	1.6	3	48.6		
Rural	F	380	0	0	5	13	362		
	%	46.6	0	0	.6	1.6	44.6		
Total	F	811	0	0	18	37	756		
	%	100	0	0	2.2	4.6	93.2		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.23 explains the results about the help of teachers to students regarding the school work. The results showed an insignificant relationship. On the basis of p-value (.082) between the locations, most of the respondents told that they do their school work with the help of teachers. Responses show that urban areas students get more help during homework assignments when compared with rural areas students. Hence rural areas students need less help than urban students.

Q. 2. I can study a chapter for a test?

Table 4.24: Preparation for a test with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
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Urban	F	403	1	2	12	31	385		
	%	49.7	.1	.2	1.5	3.8	47.5		
Rural F		408	0	0	1	18	361	13.375	.010**
	%	50.3	0	0	.1	2.2	44.5		
Total	F	811	1	2	13	49	746		
	%	100	.1	.2	1.6	6	92.0		

**p<.01, *P<.05, *df= 4, χ^2 at 0.05 level = 9.488

Table 4.24 explains the results about the preparation of a test. The results showed significant relationship. On the basis of p-value (.010) between the locations, most of the respondents told that they do not prepare their test. Responses show that urban areas students were lazier while preparing the tests when compared with rural students. Hence rural areas students exercise less laziness than urban areas students during preparing the tests.

Q. 3. I succeed in passing all subjects?

Table 4.25: Success in passing all Subjects with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	0	155	12	36	228		
	%	53.1	0	19.1	1.5	4.4	28.1		
Rural F		380	0	206	8	26	140	27.563	.000**
	%	46.9	0	25.4	.1	3.2	17.3		
Total	F	811	0	361	20	62	368		
	%	100	0	44.5	2.5	7.6	45.4		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.25 shows the results about the preparation of a test to pass out the subjects. The results showed significant relationship. On the basis of p-value (.000) between the locations, most of the respondents told that they do not pass their test. Responses show that urban areas students do not qualify the tests when compared with rural areas students. Hence more rural areas students pass the subjects than urban students during the tests.

Q. 4. I succeed in satisfying my parents with my schoolwork?

Table 4.26: Success in Satisfaction of Parents about School Work with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	2	2	20	305	74	2.401	.662
	%	53.1	.2	.2	2.5	37.6	9.1		
Rural	F	380	0	0	0	406	2		
	%	46.9	0	0	0	50.1	.2		
Total	F	811	2	2	20	711	76		
	%	100	.2	.2	2.5	87.7	9.4		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.26 indicates the results about the satisfaction of parents with the school work of their children. The results showed an insignificant relationship. On the basis of p-value (.662) between the locations, most of the respondents told that they able to satisfy their parents about their school work. Responses show that rural areas students have higher satisfaction when compared with urban areas students.

Q. 5. I succeed in passing a test?

Table 4.27: Success in Passing a Test with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	2	2	21	29	377	7.247	.123
	%	53.1	.2	.2	2.6	3.6	46.5		
Rural	F	380	0	0	9	25	346		
	%	46.9	0	0	1.1	3.1	42.7		
Total	F	811	2	2	30	54	723		
	%	100	.2	.2	3.7	6.7	89.1		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.27 expresses the results about the success in passing the test. The results showed an insignificant relationship on the basis of p-value (.123) between the locations.

Most of the respondents able to succeed in the exams. Responses show the ratio of urban areas students is higher than that of rural areas students in passing the test. Hence rural areas students show more laziness during the test than urban students.

4.6 Relationship of Location with Social Self Efficacy

Analysis regarding Relationship of Gender with Social Self Efficacy discussed in this part of the study.

Q. 6. I become friends with other children?

Table 4.28: Friendship with other Children with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	0	3	14	375	39	7.899	.095
	%	53.1	0	.4	1.7	46.2	4.8		
Rural F		380	1	1	3	341	34		
	%	46.9	.1	.1	.4	42	4.2		
Total	F	811	1	4	17	716	73		
	%	100	.1	.5	2.1	88.3	9		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

In the above table 4.28 it is indicated the results about the friendship among students. The results showed an insignificant relationship on the basis of p-value (.095) between the locations. Most of the respondents make friends. Responses show the ratio of urban areas students is higher than that of rural areas students with respect to friendship. Hence rural areas students showed more laziness in making friends than urban areas students.

Q. 7. I work in harmony with my class mates?

Table 4.29: Work in Harmony with Class Mates with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	3	5	16	27	380		
	%	53.1	.4	.6	2	3.3	46.9		
RuralF		380	3	0	8	26	343		

	%	46.9	.4	0	1	3.2	42.3	6.397
Total	F	811	6	5	24	53	723	
	%	100	.7	.6	3	6.5	89.1	

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.29 explains the results about the harmony among students. The results showed an insignificant relationship on the basis of p-value (.171) between the locations. Most of the respondents show harmony with friends. Responses show the ratio of urban areas students is higher than that of rural areas students with respect to harmony. Hence rural areas students showed more laziness with respect to harmony than urban students.

Q. 8. I tell a funny event to a group of children?

Table 4.30: Sharing of Funny Events with Children with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	4	7	362	27	31		
	%	53.1	.5	.9	44.6	3.3	3.8		
Rural	F	380	4	5	318	23	30	.311	.989
	%	46.9	.5	.6	39.2	2.8	3.7		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.30 expresses the results about the sharing of stories with friends. The results showed an insignificant relationship on the basis of p-value (.989) between the locations. Most of the respondents share stories with friends. Responses show the ratio of urban students is higher than that of rural students with respect to become isolation. This happening some times. Hence urban students showed more isolation than rural students.

Q. 9. I succeed in staying friends with other children?

Table 4.31: Success in Staying Friends with other Children with Respect to Location

	N	NA	N	ST	W	VW	χ^2	P-val
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Urban	F	431	3	0	14	389	25	3.629	.459
	%	53.1	.4	0	1.7	48.0	3.1		
Rural	F	380	4	2	8	342	24		
	%	46.9	.5	.2	1.0	42.2	3.0		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.31 indicates the results about to remain friends with other children. The results showed an insignificant relationship on the basis of p-value (.459) between the locations. Both of the groups make friends. Responses show the ratio of urban areas students is higher than that of rural areas students with respect friendship. Hence urban areas students make more friends than rural areas students.

Q. 10. I succeed in preventing quarrels with other children?

Table 4.32: Preventing Quarrels with Children with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	6	6	18	381	20	3.162	.531
	%	53.1	.7	.7	2.2	47.0	2.5		
Rural	F	380	11	4	12	338	15		
	%	46.9	1.4	.5	1.5	41.7	1.8		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.32 explains the results about to quarrels with other children. The results showed an insignificant relationship on the basis of p-value (.531) between the locations. Most of the respondents do not quarrel with their friends. Responses show the ratio of urban areas students is higher than that of rural areas students with respect quarrel.

4.7 Relationship of Location with Emotional Self Efficacy

Analysis regarding Relationship of Location with Academic Self Efficacy discussed in this part of the study.

Q. 11. I prevent to become nervous?

Table 4.33: Prevention from Nervousness with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	2	6	39	74	282		
	%	53.1	.2	.7	4.8	9.1	34.8		
Rural	F	380	0	1	0	2	405	134.778	.000**
	%	46.9	0	.1	0	.2	49.9		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.33 shows the results about the prevention of nervousness. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents become nervous. Responses show the ratio of rural areas students is higher than that of urban areas students with respect nervousness. Hence rural areas students showed more anxiety than male students.

Q. 12. I control your feelings?

Table 4.34: Control of Feeling with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	3	6	173	225	24		
	%	53.1	.4	.7	21.3	27.7	3		
RuralF		380	2	2	212	138	26	23.970	.000**
	%	46.9	.2	.2	26.1	17.0	3.2		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.34 indicates the results about to control the feelings. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents were unable to control their feelings. Responses show the ratio of urban areas students is higher than that of rural areas students with respect to control of feelings. Hence urban areas students showed more violence than rural areas students.

Q. 13. I tell a friend that you don't feel well?

Table 4.35: Share of Feeling with Friend with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	0	0	17	35	351		
	%	53.1	0	0	2.1	4.3	43.3		
RuralF		380	0	0	1	2	405	47.483	.000**
	%	46.9	0	0	.1	.2	49.9		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.35 explains the results about to feelings of frustration. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents share their feelings with friends. Responses show the ratio of rural areas students is higher than that of urban areas students with respect feeling share. Hence rural areas students share their feelings more freely than urban students.

Q. 14. I succeed in suppressing unpleasant thoughts?

Table 4.36: Suppressing about Unpleasant Thoughts with respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	2	6	181	224	18		
	%	53.1	.2	.7	22.3	27.6	2.2		
Rural	F	380	4	4	220	132	20	25.634	.000**
	%	46.9	.5	.5	27.1	16.3	2.5		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.36 shows the results about to suppressing unpleasant thoughts with other children. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents do not suppressing unpleasant thoughts friends. Responses show the ratio of urban areas respondents is higher than that of rural areas respondents with respect to suppressing unpleasant thoughts in schools.

Q. 15. I succeed in not worrying about things that might happen?

Table 4.37: Success in not Worrying about things with Respect to Location

		N	NA	N	ST	W	VW	χ^2	P-val
Urban	F	431	2	5	34	373	17		
	%	53.1	.2	.6	4.2	46.0	2.1		
Rural	F	380	8	9	17	338	8	12.214	.016*
	%	46.9	1.0	1.1	2.1	41.7	1.0		

**p<.01, *P<.05

*df= 4, χ^2 at 0.05 level = 9.488

Table 4.37 expresses the results about to mind the things that happen. The results showed a significant relationship on the basis of p-value (.016) between the locations. Most of the respondents worry about difference incidents. Responses show the ratio of urban areas students is higher than rural areas students who worry about different incidents.

4.8 Achievement Score of Students on the basis of Descriptive Statistics with respect to Tehsil Level

Tehsil wise achievement score in the subject of Biology or Computer Science

Table 4.38: Achievement Score of Students in the Subject of Biology or Computer on the Basis of Tehsil Level

City	N	Mean	SD	Min	Max
OKARA	263	46.86	3.054	39	50
RENALA KHURD	257	45.68	4.559	31	50
DEPALPUR	291	44.74	5.646	31	50
Total	811	45.73	4.665	31	50

It is obvious from the table that most of the respondents belonged to Depalpur and the least belonged to Okara. Results from standard deviation revealed that intehsil Okara students showed better results in the subject of Biology or Computer Science. On the other hand, the respondents from tehsil Depalpur showed poor results.

Tehsil wise achievement score in the subject of chemistry

Table 4.39: Achievement Score of Students in the Subject of Chemistry on the Basis of Tehsil Level

City	N	Mean	SD	Min	Max
OKARA	263	47.23	3.140	42	53
RENALA KHURD	257	45.49	4.542	32	53
DEPALPUR	291	45.14	5.057	32	53
Total	811	45.93	4.439	32	53

It is obvious from the table 4.39 that most of the respondents belonged to Depalpur and the least belonged to Okara. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Chemistry. On the other hand, the respondents from tehsil Depalpur showed poor results.

Tehsil wise achievement score in the subject of Physics

Table 4.40: Achievement Score of Students in the subject of Physics on the Basis of Tehsil Level

City	N	Mean	SD	Min	Max
OKARA	263	51.86	4.552	43	60
RENALA KHURD	257	51.19	5.620	39	60
DEPALPUR	291	49.66	6.517	34	60
Total	811	50.86	5.725	34	60

It is obvious from the table 4.40 that most of the respondents belonged to Depalpur and the least belonged to Okara. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Physics. On the other hand, the respondents from tehsil Depalpur showed poor results.

Tehsil wise achievement score in the subject of Maths

Table 4.41: Achievement Score of Students in the Subject of Maths on the Basis of Tehsil Level

City	N	Mean	SD	Min	Max
OKARA	263	55.44	3.448	51	61
RENALA KHURD	257	54.68	4.131	41	61
DEPALPUR	291	53.45	5.654	41	61
Total	811	54.48	4.624	41	61

It is obvious from the table 4.41 that most of the respondents belonged to Depalpur and the least belonged to Okara. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Maths. On the other hand, the respondents from tehsil Depalpur showed poor results.

Overall Tehsil wise achievement score in all the subjects

Table 4.42: Overall Achievement Score of Students on the Basis of Tehsil Level

City	N	Mean	SD	Min	Max
OKARA	263	201.40	8.098	187	216
RENALA KHURD	257	197.04	14.965	144	216
DEPALPUR	291	192.98	19.654	144	216
Total	811	197.00	15.568	144	216

It is obvious from the table 4.42 that most of the respondents belonged to Depalpur and the least belonged to Okara. Overall results from standard deviation revealed that in tehsil Okara students showed better results. On the other hand, the respondents from tehsil Depalpur showed poor results.

4.9 Results Related to ANOVA

Achievement Scores in the Subject of Biology or Computer with respect to Tehsil Level

Table 4.43: Achievement Scores in the Subject of Biology or Computer with respect to Tehsil Level

City	Sum of squares	DF	Mean Square	F	P
Between Groups	622.198	2	311.099		
Within Groups	17008.579	808	21.050	14.779	000
Total	17630.777	810			

According to table 4.43, Results $F(2, 311) = 14.77$, $P = 000$ indicate that the students in three tehsils showed a significant result in the subject of Biology or Computer Science on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of students.

Achievement Scores in the Subject of Chemistry with respect to Tehsil Level

Table 4.44: Achievement Scores in the Subject of Chemistry with respect to Tehsil Level

City	Sum of squares	DF	Mean Square	F	P
Between Groups	678.273	2	339.136		
Within Groups	15281.579	808	18.913	17.932	000
Total	15959.852	810			

Table 4.44 shows the results $F(2, 339) = 17.932$, $P = 000$. It is indicated that the students in three tehsils showed a significant result in the subject of Chemistry on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of students.

Achievement Scores in the Subject of Physics with respect to Tehsil Level

Table 4.45: Achievement Scores in the Subject of Physics with respect to Tehsil Level

City	Sum of squares	DF	Mean Square	F	P
Between Groups	711.655	2	355.828		
Within Groups	25832.465	808	31.971	11.130	000
Total	26544.121	810			

Table 4.45 shows that results $F(2, 355) = 11.130$, $P = 000$ indicate that the students in three tehsils showed a significant result in the subject of Physics on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.

Achievement Scores in the Subject of Maths with respect to Tehsil Level

Table 4.46: Achievement Scores in the Subject of Maths with respect to Tehsil Level

City	Sum of squares	DF	Mean Square	F	P
Between Groups	563.960	2	281.980		
Within Groups	16752.597	808	20.733	13.600	000
Total	17316.557	810			

According to table 4.46, results $F(2, 281) = 13.600$, $P = 000$ indicate that the students in three tehsils showed a significant result in the subject of Math on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.

Over all achievement Scores on the basis of Tehsil Level

Table 4.47: Over all achievement Scores with respect to Tehsil Level

City	Sum of squares	DF	Mean Square	F	P
Between Groups	9777.589	2	4888.795		
Within Groups	186529.400	808	230.853	21.177	000
Total	196306.989	810			

According to table 4.47, Results $F(2, 4888) = 21.177$, $P = 000$ indicate that the students in three tehsils showed a significant result in all the science subjects on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of those students.

FINDINGS AND CONCLUSIONS

1. The table 4.1 indicates that percentage of male students (49.3 %) was lower than that of female students (50.7 %).
2. According to table 4.2, the greater number of subjects i.e. 291 (35.9 %) belonged to Depalpur, while the smaller number of subjects were from Renala Khurd i.e. 257 (31.7 %).
3. Table 4.3 expresses the classification of fathers' education of respondents. It was found that the highest numbers of subjects belonged to FA Educational level i.e.181 (22.3 %). On the other hand, the lower number of respondents was only 74 (9.1 %) whom fathers' education was MA.
4. Table 4.4 explains the classification of fathers' profession of the respondents. It is expressed that the most of the respondents belonged to such families whose fathers were businessmen i.e.258 (31.8%) and the least number of parents belonged to employees i.e.40 (4.9%).
5. Table 4.5 explains the classification of respondents with respects to mothers' education. It is expressed that the most respondents belonged to category whom mothers were only Matric i.e. 267 (32.9%). Least number of respondents were only 53 (6.5%).
6. Table 4.6 indicates the classification of mothers' profession of the respondents. It is expressed that the most of the respondents belonged to such families whose mothers were house wives i.e. 549 (67.7%) and the least number of parents belonged to Employees 74 (9.1%).
7. Table 4.7 explains the classification of family with respect to income. It is expressed that the large number of respondents belonged income range (20000-30000) having percentage 39.3. On the other hand, the least number of respondents belonged to income range (below 10000) having percentage of 7.2 only.
8. Table 4.8 shows the results about the help of teachers to students regarding the school work. The results showed significant relationship. On the basis of p-value (.000) between the genders. Most of the respondents told that they do their school work without the help of teachers. Responses showed that male students do their homework independently when compared with female students. Hence female students need more help than male students.

9. Table 4.9 expresses the results about the preparation for the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents told that they did not prepare for their test. Responses showed that male students were more careless when compared with female students. Hence female students prepared their tests well than male students.
10. Table 4.10 explains the results about the success of passing the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents told that they do not succeed in their test. Responses showed that male students faced more failure when compared with female students. Hence on the basis of results more female students passed through the exams than male students.
11. Table 4.11 expresses the results about the satisfaction of parents with respect to school work. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents did not satisfy their parents regarding the school work. Responses showed that ratio of female students were higher than that of male students in the school work activities. Hence female students showed more laziness in school work than male students.
12. Table 4.12 indicates the results about the success in passing the test. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents did not able to succeed in the exams. Responses showed the ratio of female students were higher than that of male students in not passing the test. Hence female students showed more laziness during the test than male students.
13. Table 4.13 shows the results about the friendship among students. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents were not able to make friends. Responses showed the ratio of female students were higher than that of male students with respect to friendship. Hence female students showed more laziness in making friends than male students.
14. Table 4.14 explains the results about the harmony among students. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents did not show harmony with friends. Responses showed the ratio of female students were higher than that of male students with respect to harmony. Hence female students showed more laziness with respect to harmony than male students.
15. Table 4.15 shows the results about the sharing of stories with friends. The results showed significant relationship on the basis of p-value (.000) between the genders.

Most of the respondents did not share stories with friends. Responses showed the ratio of female students were higher than that of male students with respect to become isolation. Hence female students showed more isolation than male students.

16. Table 4.16 shows the results about to remain friends with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not make friends. Responses showed the ratio of female students were higher than that of male students with respect friendship. Hence female students showed more isolation than male students.
17. Table 4.17 expresses the results about to quarrels with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents did not refrain from quarreling. Responses showed the ratio of female students were higher than that of male students with respect quarrel. Hence female students showed more aggression than male students.
18. Table 4.18 indicates the results about the prevention of nervousness. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents became nervous. Responses showed the ratio of female students were higher than that of male students with respect nervousness. Hence female students showed more anxiety than male students.
19. Table 4.19 explains the results about to control the feelings. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents were unable to control their feelings. Responses showed the ratio of male students were higher than that of female students with respect to control of feelings. Hence male students showed more violence than male students.
20. Table 4.20 expresses the results about to feelings of frustration. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents shared their feelings with friends. Responses showed the ratio of female students were higher than that of male students with respect feeling share. Hence female students share their feelings more freely than male students.
21. Table 4.21 indicates the results about to suppressing unpleasant thoughts with other children. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents do not suppressing unpleasant thoughts friends. Responses showed the ratio of female and male students suppressing unpleasant thoughts is almost same.

22. Table 4.22 explains the results about to mind the things that happen. The results showed significant relationship on the basis of p-value (.000) between the genders. Most of the respondents were worried about difference incidents. Responses showed the ratio of female students were higher than male students who worry about different incidents.
23. Table 4.23 indicates the results about the help of teachers to students regarding the school work. The results showed insignificant relationship. On the basis of p-value (.082) between the locations, most of the respondents told that they did their school work with the help of teachers. Responses showed that urban areas students got more help during homework assignments when compared with rural areas students. Hence rural areas students need less help than urban students.
24. According to table 4.24, the results about the preparation of a test. The results showed significant relationship. On the basis of p-value (.010) between the locations, most of the respondents told that they did not prepare their test. Responses showed that urban areas students were lazier while preparing the tests when compared with rural students. Hence rural areas students exercised less laziness than urban areas students during preparing the tests.
25. Table 4.25 expresses the results about the preparation of a test to pass out the subjects. The results showed significant relationship. On the basis of p-value (.000) between the locations, most of the respondents told that they did not pass their test. Responses showed that urban areas students did not qualify the tests when compared with rural areas students. Hence more rural areas students passed the subjects than urban students during the tests.
26. Table 4.26 explains the results about the satisfaction of parents with the school work of their children. The results showed an insignificant relationship. On the basis of p-value (.662) between the locations, most of the respondents told that they were able to satisfy their parents about their school work. Responses showed that rural areas students had higher satisfaction when compared with urban areas students.
27. Table 4.27 shows the results about the success in passing the test. The results showed an insignificant relationship on the basis of p-value (.123) between the locations. Most of the respondents able to succeed in the exams. Responses showed the ratio of urban areas students is higher than that of rural areas students in passing the test. Hence rural areas students show more laziness during the test than urban students.

28. Table 4.28 indicates the results about the friendship among students. The results showed an insignificant relationship on the basis of p-value (.095) between the locations. Most of the respondents make friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect to friendship. Hence rural areas students showed more laziness in making friends than urban areas students.
29. Table 4.29 expresses the results about the harmony among students. The results showed an insignificant relationship on the basis of p-value (.171) between the locations. Most of the respondents show harmony with friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect to harmony. Hence rural areas students showed more laziness with respect to harmony than urban students.
30. Table 4.30 indicates the results about the sharing of stories with friends. The results showed an insignificant relationship on the basis of p-value (.989) between the locations. Most of the respondents share stories with friends. Responses showed the ratio of urban students is higher than that of rural students with respect to become isolation. This happening some times. Hence urban students showed more isolation than rural students.
31. Table 4.31 expresses the results about to remain friends with other children. The results showed an insignificant relationship on the basis of p-value (.459) between the locations. Both of the groups make friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect friendship. Hence urban areas students make more friends than rural areas students.
32. Table 4.32 indicates the results about to quarrels with other children. The results showed an insignificant relationship on the basis of p-value (.531) between the locations. Most of the respondents do not quarrel with their friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect quarrel.
33. Table 4.33 shows the results about the prevention of nervousness. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents become nervous. Responses showed the ratio of rural areas students is higher than that of urban areas students with respect nervousness. Hence rural areas students showed more anxiety than male students.

34. Table 4.34 explains the results about to control the feelings. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents were unable to control their feelings. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect to control of feelings. Hence urban areas students showed more violence than rural areas students.
35. Table 4.35 expresses the results about to feelings of frustration. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents share their feelings with friends. Responses showed the ratio of rural areas students is higher than that of urban areas students with respect feeling share. Hence rural areas students share their feelings more freely than urban students.
36. Table 4.36 shows the results about to suppressing unpleasant thoughts with other children. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents do not suppressing unpleasant thoughts friends. Responses showed the ratio of urban areas respondents is higher than that of rural areas respondents with respect to suppressing unpleasant thoughts in schools.
37. Table 4.37 indicates the results about to mind the things that happen. The results showed a significant relationship on the basis of p-value (.016) between the locations. Most of the respondents worry about difference incidents. Responses showed the ratio of urban areas students is higher than rural areas students who worry about different incidents.
38. It is obvious from the table that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Biology or Computer Science. On the other hand, the respondents from tehsil Depalpur showed poor results.
39. It is obvious from the table that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Chemistry. On the other hand, the respondents from tehsil Depalpur showed poor results.
40. It is obvious from the table 4.40 that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Physics. On the other hand, the respondents from tehsil Depalpur showed poor results.

41. It is obvious from the table 4.41 that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Maths. On the other hand, the respondents from tehsil Depalpur showed poor results.
42. It is obvious from the table 4.42 that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Overall results from standard deviation revealed that in tehsil Okara students showed better results. On the other hand, the respondents from tehsil Depalpur showed poor results.
43. According to table 4.43, Results $F(2, 311) = 14.77, P = 0.00$ indicate that the students in three tehsils showed a significant result in the subject of Biology or Computer Science on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of students.
44. Table 4.44 explains the results $F(2, 339) = 17.932, P = 0.00$. It is indicated that the students in three tehsils showed a significant result in the subject of Chemistry on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of students.
45. Table 4.45 shows that results $F(2, 355) = 11.130, P = 0.00$ indicate that the students in three tehsils showed a significant result in the subject of Physics on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.
46. According to table 4.46, results $F(2, 281) = 13.600, P = 0.00$ indicate that the students in three tehsils showed a significant result in the subject of Math on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.
47. According to table 4.47, Results $F(2, 4888) = 21.177, P = 0.00$ indicate that the students in three tehsils showed a significant result in all the science subjects on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of those students.

The conclusion drawn from the results of the study were as under:

1. The percentage of male students (49.3 %) was lower than that of female students (50.7 %).
2. The greater number of subjects 291 (35.9 %) belonged to Tehsil Depalpur, while the smaller number of subjects were from Tehsil Renala 257 (31.7 %).
3. It was found that the highest numbers of subjects belongs to FA Educational level i.e. 181 (22.3 %). On the other hand, the lower number of respondents was only 74 (9.1%) whom fathers' education was MA.
4. Most of the respondents belonged to such families whose fathers were businessmen i.e. 258 (31.8%) and the least number of parents belonged to employees 40 (4.9%).
5. Most respondents belonged to category whom mothers were only Matric.
6. Most of the respondents belonged to such families whose mothers were house wife and the least number of parents belonged to Employees.
7. Most of respondents belonged income range (20000-30000) while the least number of respondents belonged to income range (below 10000).
8. The results about the help of teachers to students regarding the school work showed significant relationship. Most of the respondents told that they did their school work without the help of teachers. Responses show that male students do their homework independently when compared with female students. Hence female students need more help than male students.
9. Most of the respondents told that they do not prepare for their test. Responses showed that male students were more careless when compared with female students. Hence female students prepare their tests well than male students.
10. Most of the respondents told that they do not succeed in their test. Responses show that male students face more failure when compared with female students. Hence on the basis of results more female students passed through the exams than male students.
11. Most of the respondents do not satisfy their parents regarding the school work. Responses showed the ratio of female students is higher than that of male students in the school work activities. Hence female students showed more laziness in school work than male students.
12. Most of the respondents do not able to succeed in the exams. Responses showed the ratio of female students is higher than that of male students in not passing the test. Hence female students showed more laziness during the test than male students.

13. Most of the respondents do not able to make friends. Responses show the ratio of female students is higher than that of male students with respect to friendship. Hence female students showed more laziness in making friends than male students.
14. The results showed significant relationship regarding the harmony among students on the basis of p-value (.000) between the genders. Most of the respondents do not show harmony with friends. Responses show the ratio of female students is higher than that of male students with respect to harmony. Hence female students showed more laziness with respect to harmony than male students.
15. When the comparison was made about the sharing of stories with friends. The results showed significant relationship. Students do not share stories with friends. Responses showed the ratio of female students is higher than that of male students with respect to become isolation. Hence female students showed more isolation than male students.
16. After analyzing the friendship with other children. The results showed significant relationship. Most of the respondents do not make friends. Responses showed the ratio of female students is higher than that of male students with respect friendship. Hence female students showed more isolation than male students.
17. After analyzing the indicator of quarrel with other children. The results showed significant relationship. Most of the respondents do not refrain from quarreling. Responses showed the ratio of female students is higher than that of male students with respect quarrel. Hence female students showed more aggression than male students.
18. Most of the respondents become nervous. Responses showed the ratio of female students is higher than that of male students with respect nervousness. Hence female students showed more anxiety than male students.
19. Most of the respondents unable to control their feelings. Responses showed the ratio of male students is higher than that of female students with respect to control of feelings. Hence male students showed more violence than male students.
20. Most of the respondents share their feelings with friends. Responses showed the ratio of female students is higher than that of male students with respect feeling share. Hence female students share their feelings more freely than male students.
21. Most of the respondents do not suppressing unpleasant thoughts friends. Responses show the ratio of female and male students suppressing unpleasant thoughts is almost same.

22. Most of the respondents worry about difference incidents. Responses showed the ratio of female students is higher than male students who worry about different incidents.
23. Most of the respondents told that they do their school work with the help of teachers. Responses showed that urban areas students get more help during homework assignments when compared with rural areas students. Hence rural areas students need less help than urban students.
24. Most of the respondents told that they do not prepare their test. Responses show that urban areas students were lazier while preparing the tests when compared with rural students. Hence rural areas students exercise less laziness than urban areas students during preparing the tests.
25. On the basis of p-value (.000) between the locations, most of the respondents told that they do not pass their test. Responses showed that urban areas students do not qualify the tests when compared with rural areas students. Hence more rural areas students pass the subjects than urban students during the tests.
26. The results showed an insignificant relationship about the satisfaction of parents with the school. On the basis of the locations, most of the respondents told that they able to satisfy their parents about their school work. Responses show that rural areas students have higher satisfaction when compared with urban areas students.
27. Most of the respondents able to succeed in the exams. Responses showed the ratio of urban areas students is higher than that of rural areas students in passing the test. Hence rural areas students show more laziness during the test than urban students.
28. When the results about the friendship among students were compared. It showed an insignificant relationship. Most of the respondents make friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect to friendship. Hence rural areas students showed more laziness in making friends than urban areas students.
29. Most of the respondents show harmony with friends. Responses show the ratio of urban areas students is higher than that of rural areas students with respect to harmony. Hence rural areas students showed more laziness with respect to harmony than urban students.
30. The results about the sharing of stories with friends showed an insignificant relationship on the basis of p-value (.989) between the locations. Most of the respondents share stories with friends. Responses showed the ratio of urban students

- is higher than that of rural students with respect to become isolation. This happening some times. Hence urban students showed more isolation than rural students.
31. Both of the groups make friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect friendship. Hence urban areas students make more friends than rural areas students.
 32. Most of the respondents do not quarrel with their friends. Responses showed the ratio of urban areas students is higher than that of rural areas students with respect quarrel.
 33. Most of the respondents become nervous. Responses showed the ratio of rural areas students is higher than that of urban areas students with respect nervousness. Hence rural areas students showed more anxiety than male students.
 34. Most of the respondents were unable to control their feelings. Responses show the ratio of urban areas students is higher than that of rural areas students with respect to control of feelings. Hence urban areas students showed more violence than rural areas students.
 35. Most of the respondents share their feelings with friends. Responses showed the ratio of rural areas students is higher than that of urban areas students with respect feeling share. Hence rural areas students share their feelings more freely than urban students.
 36. The results showed a significant relationship on the basis of p-value (.000) between the locations. Most of the respondents do not suppressing unpleasant thoughts friends. Responses showed the ratio of urban areas respondents is higher than that of rural areas respondents with respect to suppressing unpleasant thoughts in schools.
 37. Most of the respondents worry about difference incidents. Responses showed the ratio of urban areas students is higher than rural areas students who worry about different incidents.
 38. Greater number of respondents belonged to Depalpur and the least belonged to Renala Khurd. Results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Biology or Computer Science. On the other hand, the respondents from tehsil Depalpur showed poor results.
 39. It is obvious from the table that most of the respondents belonged to Depalpur and the least belonged to Renala Khurd. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Chemistry. On the other hand, the respondents from tehsil Depalpur showed poor results.

40. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Physics. On the other hand, the respondents from tehsil Depalpur showed poor results.
41. Overall results from standard deviation revealed that in tehsil Okara students showed better results in the subject of Maths. On the other hand, the respondents from tehsil Depalpur showed poor results.
42. Overall results from standard deviation revealed that in tehsil Okara students showed better results. On the other hand, the respondents from tehsil Depalpur showed poor results.
43. Results indicate that the students in three tehsils showed a significant result in the subject of Biology or Computer Science on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of students.
44. Results indicated that the students in three tehsils showed a significant result in the subject of Chemistry on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of students.
45. The students in three tehsils showed a significant result in the subject of Physics on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.
46. The students in three tehsils showed a significant result in the subject of Math on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subject. Hence there is a significant difference in the achievement scores of those students.
47. The students in three tehsils showed a significant result in all the science subjects on the basis of their achievement scores. It was obvious that in these tehsils there is a great variation in teaching the respective subjects. Hence there is a significant difference in the achievement scores of those students.

The research showed that educational self-efficacy has a brawny, straight association with educational accomplishment and an tortuous association via negligence. As projected, educational self-efficacy had a brawny connection with educational achievement. This is in line with earlier study that has confirmed that youthful people who trust in their competencies

to work out manage over their learning achievement, attain good results academically than competitors who have low level effectual attitudes in their educational quests (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996, 2001; Brown et al., 1989; Chemers, Hu, & Garcia, 2001; Greene et al., 2004; Multon, Brown, & Lent, 1991; Robbins, Lauver, Davis, Langley, & Carlstrom, 2004; Wood & Locke, 1987).

Present research work shows a brawny upbeat association between self-efficacy and academic achievement. It is very important for the schools to perk up their student's self – efficacy, they can advance the studious achievement of their learners.

This study calculated the levels of self-efficacy of the partaker appeared secondary school examination. Outcomes illustrated that there were sex variation in the heights of self-efficacy. Female students have lesser self-efficacy contrast to male students (Pintrich and De Groot, 1990). This study also showed that boys reported upper levels of self-efficacy than girls.

. These results are in support with the self-efficacy hypothesis, which affirms that a character's effort tasks, in which he considers he is excellent at, are really very expected to become successful. The learners who confirm superior self-efficacy are more victorious with their educational achievement than the fewer doing well students who are unenthusiastic to believe tasks they consider as too hard due to lack of credence and capacities for achievement(Pajares (2000).

Numerous research works stated that self-efficacy becomes an important conception in the educational fields (Cohn and Frederickson, 2009; Langeland, Wahl, Kristoffersen, and Hanestad 2007and Steindhart and Dolbier 2009). In a meta-analysis of 39 studies from 1977 to 1988 reveals that self-efficacy, academic achievements were positively and statistically related to one another for numerous aspects/fields. (Multon, Brown and Lent, 1991).

Overall, the results of this study show that the perception of school students have about their competencies powers their studious recital and their determination to maintain a good result that allows them to carry on in their selected course of study. This study supplementary supports other research that academic self-efficacy is definitely related with good academic results (Bong, 2001; Pajares & Schunk, 2001; Zimmerman, 2000).

The research findings from the current study show that self-efficacy beliefs affect academic success as well as self-efficacy levels differ regarding gender, locality, mother tongue and tehsil.

So, above discussion proved that self-efficacy is positively correlated with the achievement of students in science.

Following recommendations were made in the light of findings and conclusions of the study:

1. This study proved that self-efficacy has great effect on students' achievement in science. It is therefore, recommended that educators, schools and parents must play their role to enhance student's self-efficacy.
2. Research showed that a strong constructive association between self-efficacy and educational achievement recommended the need to direct counsel concentration to secondary level students.
3. Teacher training institutes should consider self-efficacy as an important factor to learn, so they should train the teachers to enhance the level of self-efficacy among the students.
4. Science educators must develop lecture tactics keeping in mind to upgrade the level of self-efficacy among the students.
5. Course book authors may integrate activities in textbooks to facilitate the teaching learning process and helpful to enhance the level of self-efficacy.

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