EFFECT OF MENTORING ON ACADEMIC ACHIEVEMENT OF STUDENTS AT SECONDARY SCHOOL LEVEL

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A thesis submitted in partial fulfilment of the requirement for the degree

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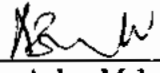# INTERNATIONAL ISLAMIC UNIVERSITY
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2021

Dedication

This Dissertation is dedicated to my

Family and my Teachers who supported

me to accomplish the task

SUPERVISOR'S CERTIFICATE

The thesis titled "Effect of Mentoring on Academic Achievement of Students at Secondary School Level" submitted by Mr. Muhammad Arshed Hussain Malik Registration No. 106-FSS/PHD/EDU/S13 is partial fulfilment of PhD degree in Education, has been completed under my guidance and supervision. I am satisfied with the quality of student's research work and allow her to submit this for further process as per IIUI rules and regulation.

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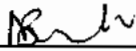
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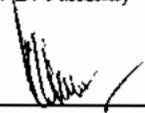
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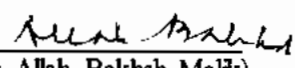
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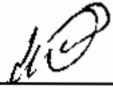
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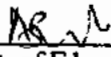
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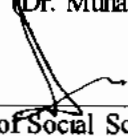
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AUTHOR'S DECLERATION

I, Muhammad Arshed Hussain Malik Registration No. 106-FSS/PHD/EDU/S13 as a student of PhD in Education at International Islamic University, Islamabad do hereby declare that the thesis entitled "Effect of Mentoring on Academic Achievement of Students at Secondary School Level" submitted for the partial fulfilment of PhD in Education is my original work, except where otherwise acknowledged in the text and has not been submitted or published earlier and shall not in future, be submitted by researchers for obtaining any degree from this or any other university or institutions.

Muhammad Arshed Hussain Malik

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Abstract

Pakistan is facing multiple problems in education sector mainly budgetary limitations, non-prioritization and discontinuation of education policies, high rate of school drop outs, out of school children, low quality education, and poor teaching techniques and methods. This necessitates a debate on creating a robust education system that may deliver in terms of quantitative and qualitative achievements. In an education system, student is considered the basic unit through whom all educational goals are achieved. Hence, need arises that the student has to be concentrated for his/her enhanced learning which would motivate him/her to continue education with accomplishment of academic goals. Mentoring is considered as an effective practice to provide a student "learning support" which would result in a student's higher academic achievement. Perceived in this perspective, the objectives of the current study were twofold: (i) To find out the effect of mentoring on the academic achievement of the students at secondary school level. (ii) To assess the effect of mentoring on the degree of retention of the students at secondary school level. True experimental research design was selected. The population of the study consisted of 137 government boys' secondary schools and 46,189 students enrolled at secondary level in district Chakwal. The sample of the study formed 93 students enrolled in 10th class at Government High School Malikwal, district Chakwal. At first stage pre-test was administered to all these 93 students. On the basis of pre-test result forty (40) low achievers were selected for mentoring intervention. Further, these 40 students were divided randomly into control group and experimental group having 20 students in each group. The mentor teacher was trained for one week according to continuous professional development (CPD) mentoring framework. It included Taleemi calendar, lesson planning, activity based teaching and lerning, use of supportive material, student teacher interaction, classroom management, students assessment and homework. Twenty (20) students of the experimental group were taken as mentees. Then mentoring intervention was provided for four weeks by the mentor teacher to the mentee students of experimental group. Independent sample t-test formula and Levene's sample equality test was used to measure the means and difference between the the groups. The mean difference of control group and experimental group revealed that mentoring intervention significantly enhanced academic achievement of the mentees with a large effect size. It was found that mentoring intervention was very effective in enhancing academic achievement of the mentee students. In order to see the effect of mentoring in retaining the achievement scores the post-test was re-administered after one month as a retention test. No significant difference was observed in post-test and retention test scores. It showed that mentoring intervention was stable.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CPD:	Continuous Professional Development
CTSC:	Cluster Training and Support Centre
DF:	Degree of Freedom
DSD:	Directorate of Staff Development
DTE:	District Teacher Educator
Fig.:	Figure
N:	Number of Observations
QAED:	Quaid-e-Azam Academy for Educational Development
Sig.:	Significance
SPSS:	Statistical Package for the Social Sciences
Std.:	Standard
UNESCO:	United Nations Educational, Scientific and Cultural Organization

CHAPTER 1

INTRODUCTION

Currently, Pakistan is facing problems in the areas of business, economics, peace, education, and socio-economics due to drastic changes, owing to global socio-economic changes and technological revolution (Rafiq, 2018). Besides this the traditional challenges of budgetary allocations and literacy targets created new challenges for the country. In the year 2017, as promised by the constitution, Pakistan could not achieve her set educational goals (Ali, 2018). The Constitution of Pakistan authenticates the right of the public to get free compulsory secondary education and to remove illiteracy. Article 25. A of the constitution (1973) states that the State shall provide free and compulsory education to all children from the age of five to sixteen years in such manner as may be determined by law (Constitution of Pakistan, 1973).

Thus the constitutional promises have not yet been fulfilled by the federal and provincial governments. The main reason behind this issue was the non- prioritization of education by the successive governments. Pakistan Education Statistics, 2017 reveals that nearly 22.6 million children of Pakistan are out of school which shows her clear lag in South Asia. The literacy rate of Pakistan rounds to 56.4% with an education spending of 2.83% of the total budget and currently, Pakistan is 60-plus years (more than half-a-century) behind the world concerning her secondary education (UNESCO, 2017).

On the contrary, the masses have been striving hard to get access to better opportunities (Kanwal, Chong, & Pitafi, 2019). Their struggle can be seen as an antecedent of ever-increasing urbanization due to the availability of 'better' educational facilities in urban areas (Ali, Bakhsh, & Yasin, 2019). It is further argued that such

educational opportunities would continue to create more urbanization in the future. Quantitative parameters are being used to measure these educational opportunities in cities of Pakistan. However, the current demands of local and global markets have forced educational institutions to impart better quality education in terms of better knowledge and skills. Civil society and the international donor community both are helping the Pakistan government. This has enabled Pakistan to achieve the goal of increasing the number of schools, colleges, and higher educational institutes (universities) for higher literacy rate especially among females and the number of university graduates especially PhDs (Naz, 2019). The education system of Pakistan carries some severe problems which need solutions on an urgent basis. The major problem of the Pakistani educational system is that it is not robust and future-oriented (Muhammad & Brett, 2019). This necessitates a debate on creating a robust education system that may deliver in terms of quantitative expansion and qualitative achievements.

In an education system, a student is a basic unit through which all educational goals can be achieved (Dana, & Yendol-Hoppey, 2019). So, the student must be treated as a primary client for achieving academic goals. Concurrently the teachers form a complementary part of an educational system. A teacher is a linchpin in this system for achieving academic goals. There are three basic approaches to provide learning support in an education system. They include: (i) do nothing, (ii) remedial support, and (ii) learning support (Skillen, Merten, Trivett, & Percy, 1998). In the first case, a student is solely responsible to acquire needed knowledge and skills without the core responsivity of an institution. This is an unfair approach to system development. In the second case, some learning support centers are established. They operate outside the curriculum and are marginal in character. They provide support to the students who are diagnosed to

be in the need of some additional support/help. This diagnostis may be based upon the students' rating or on the basis of their teachers' rating. Such support is quite unfair as it mainly fulfills learning objectives set outside the curriculum. In the approach of "learning support", a student is provided learning support for the knowledge and skills which are highly integrated with the curriculum. This support is an individualized focussed approach which may include additional lectures, coaching, and mentoring by the teachers or supporting staff. This is regarded as the most beneficial approach of learning which also results in student's higher academic achievement (Skillen et. al, 1998). In this context, researchers recommended mentoring to enhance the learning and academic achievement of the students (Linn et. al, 2011; Tovey, 1999).

Mentoring is an important approach to providing individualized focussed learning support in a formal or an informal way. According to Peyton, Morton, Perkins, and Dougherty (2001) mentoring refers to the process of creating a learning relationship through which an individual with rich expertise (mentor) provides knowledge to a less experienced or novice individual (mentee). Roberts (2000) defines mentoring as a process in which a more knowledgeable and experienced person plays a supportive role (role model/coach/sponsor) to encourage reflection and learning within a less experienced and less knowledgeable person. A body of empirical studies provides shreds of evidence that mentoring not only plays an effective role while achieving positive outcomes by the students learning (Bond, 1999; Quinn, Muldoon, & Hollingworth, 2002) but also plays an important role in retaining students learning (Talbert, Larke, & Jones, 1999). Ever since the emergence of this universe, mentors have been and are still a vital part of our history. They are used to induct, teach, and develop different younger persons. There are numerous famous mentors in history, who

were essential for many careers as mentioned by famous music stars, scientists, and artists in their life story writings (Whitmore, 2010).

Mentoring, essentially being individualized focussed learning support, may be provided in either a formal or informal way. However, formal mentoring reaps more benefits for the learner and the institution (McInnis, James, & McNaught, 1995). In each case, one must need to ensure that mutual choice of selection or real freedom of choice is present for the teacher becoming 'mentor' and the student being 'mentored'. This mutual freedom of choice would result in the most productive mentoring relationships between the teacher becoming 'mentor' and the student being 'mentored' (Roberts, 2000). He further argues that mentoring needs, to be an open system where a learner is exposed to various mentors from which he/she picks up the best mentor for himself/herself to satisfy learning needs.

In Ancient Greece, good teachers were primarily described as mentors, who fulfilled career functions. The teachers were also functioning as the psychosocial mentors to tap various psychosocial issues of their respective mentee students (Kram, 1985). According to the discussion made by Ragins and Cotton (1999) a teacher performs the function of a career mentor who motivates their respective mentee students to show resilience, hope, and commitment to achieve their career goals after seeking help from their mentor teachers. They further argued that the mentor teachers help their respective mentee students to build trust in their abilities, accelerate personal and professional growth, and enhance self-efficacy and resilience. A mentor serves as a guide helping and supporting the development of the mentees. The help can be related to anything like finding the right personal solution or the right path to their career. Mentors treat empathically. They bear insight. They understand the issues of their mentees. Hence their guideline helps the mentee to select from various personal and

4

careers options and to progress within it. In other words, in the mentor-mentee relationship balance, the academic and inter-personal dimensions in educational practices. Students can get help to progress their careers and enhance personal development by this tool. In a corollary, a positive relationship increases productivity. The base of mentoring is laid on mutual respect and trust and is considered as a personal and supporting relationship. It includes different levels of help/support, which includes the professional growth and personal development of the mentee. These relations are considered as two-sided, the mentors are normally ones who have strong experience and they help the mentee (Ehrich, Hansford, & Tennent, 2003). Their work analysis gives a proper definition of mentoring which is defined as, 'Mentoring tends to be broader and more holistic in focus than coaching as it is not only interested in 'maximizing performance' (Whitmore, 2010). Its base is also laid on the performance of any individual throughout the life span, in professional fields. A mentor is always a multitasked person and he can either be a coach, guide, trainer, or counselor at the same time.

Academic achievement also known as academic performance refers to the achievement of short-term or long-term academic goals. In the broader sense, these goals may include educational goals set by the institutions, teachers, or students. Typically, academic achievement includes successful completion of a program or a course. It is generally measured through examinations or continuous assessments (Wolff, Nagy, Helm, & Möller, 2018). However, there is no sole objective criterion for the evaluation process and contents. Cognitive research has yielded three kinds of knowledge: Declarative (what), Procedural (how), and Conditional (why and when). This achievement is further measured in terms of Cumulative Grade Point Average (CGPA) or percentage. Hence, high academic achievement would mean that a student

has got higher grades in their academic courses and programs. The schools earn money on the basis of this academic achievement by their students (Zeidner, 1998). Von Stumm, Hell, and Chamorro-Premuzic (2011) argue that individual differences and mental curiosity are significantly associated with intelligence and consequent academic achievement. Therefore, students with higher mental curiosity and intelligence (generally measured through intelligence quotient-IQ), achieve higher academic performance. According to Bossaert, Doumen, Buyse, and Verschueren (2011) early school-going students with the learning environment at their homes score more in terms of academic achievement in early and higher school programs. Various studies have revealed that the implementation of successful educational actions in schools significantly improves their academic achievement (Flecha, 2011). In this perspective, mentoring has a positive significant effect on the academic achievement of the students (Turner, 2018).

There are three dimensions of academic achievement termed as academic success, academic productivity, and impulse control (DuPaul, Rapport, & Perriello, 1991). They are as follow:

i. **Academic Success**: it refers to a student's estimated percentage of written work completed in compulsory and optional subjects (regardless of accuracy) relative to other classmates.

ii. **Academic Productivity**: it refers to the consistency and quality of a student's academic work regarding learning new material (i.e. novel concepts), handwriting, and reading skills, speaking skills, and retention & recalling skills.

iii. **Impulse Control**: it refers to a student's frequency of accurately following teacher(s)' directions, instructions, and/or class discussions during both the large-group (e.g., whole class) instructions and small-group (e.g., reading

group) instructions. Sometimes a student goes beyond given directions. This leads to creativity.

Previous studies have shown a significant impact of school-wide reforms on student learning and achievement (Hargreaves, Lieberman, Fullan, & Hopkins, 2010; Chan, Kuperminc, Seitz, Wilson, & Khatib, 2019; Campbell, 2019) by transforming school contexts into learning in context (Fullan, 2006). Mentoring is the key facilitating factor that transforms a school context into a "learning in context" (Tovey, 1999). Moreover, this transformation significantly brings positive outcomes of accomplished teaching, enhanced learning, and academic achievement (Linn, et. al, 2011). According to a recent study by Turner (2018), the mentoring program significantly affects the academic achievement of the students. It can, therefore, be concluded that student achievement can be enhanced through mentoring.

1.1 RATIONALE OF THE STUDY

Teaching is calling. It is worship. It requires vision and concentration. Teacher is required to have commitment to teaching. It is interactive in character. Teaching is not a telling method. It needs rich contents and appropriate delivery. It is full of challenges and to be answered through courtesy, knowledge and skill. Our present classroom teaching generally addresses the high achievers. Marginal groups, low achievers and risk cases are either ignored or less cared. This was the first gap or element of rationale that present investigation focused upon.

Previous literature has shown an empirical effect of mentoring on the academic achievement of the students by using cross-sectional data (Linn et al., 2011). In education, cross-sectional studies introduce indirect measures of the nature and changes of physical and intellectual development. The single "snapshot" of the cross-sectional

7

study provides the researcher with data for either a retrospective or prospective inquiry (Cohen, Manion, & Morrison, 2007). The cross-sectional data cannot reveal a true relationship between dependent and independent variables. Hence, the current study uses experimental study with pre-test and post-test followed by retention test. The study sets out to validate or challenge previous findings and also explore the effect of mentoring on the academic achievement of the students. This formed another logical ground for present investigation.

While there is a significant effect of mentoring on the academic achievement of the mentee students (Linn et al., 2011); there is a growing controversy in the findings of the magnitude of the effect of mentoring on student achievement. This raises a research gap in deciding the appropriate length of mentoring period and taking poor-performing schools as the target population (Ingersoll & Strong, 2011). This has created an important research problem and the present study intends to examine in its own perspective, with a fresh set of data.

This is infact the first study in our context, where mentoring is being investigated as an integral method of teaching. In the past, mentoring was used in research. This study not only uses mentoring as a method of teaching but also attempts to measure the rate of retention of student learning. Empirical studies have shown considerable evidence of the relationship of mentoring while working with poor performing schools as target population for bettering their performance. This forms an added value to this study.

This study has also filled the research gaps in deciding the appropriate length of mentoring period and taking poor-performing schools as target population as desired by Campbell (2019). Further, this study uses a tailored mentee-mentor partnership as desired by Lucas and James (2018) and Estrada, et. al, (2018) with a special focus on

natural mentoring relationships along with supportive exchanges between mentor and mentee as suggested by Hurd, et. al, (2018).

There is limited experimental research on mentoring processes in secondary schools. The prime premise of the study was to examine whether mentoring intervention in secondary schools has impact on students' academic achievement in semi rural urban areas.

1.2 STATEMENT OF THE PROBLEM

Until today, there are scarce mentoring services in Pakistan at the secondary school level, although mentoring provides numerous positive effects for both mentor and mentee. Mentors may help mentee students towards better performance. Mentors may provide extra, individual attention to those students who are ignored, and becoming risk cases. It is doubtful that mentoring is capable of eliminating the entire academic weaknesses; but, it can certainly reduce several of them, which may guide to upgrading in academic achievement (Klaw, Rhodes, & Fitzgerald, 2003).

There was a growing controversy about the magnitude of effect of mentoring on students achievement. The question related to what should be appropriate length of mentoring period and taking poor performer as the target population. No school in all together is poor performer or high achiever. The learners are mixed group. Some are high achievers and others marginal or low. This raised a question is there a significant effect of mentoring on the academic achievement of the marginal or low achievers? In a positive statement, this experimental study was conducted whether or not the mentoring services provided significant effect on academic achievement at secondary school students. Thus the purpose of the study was to explore the effect of mentoring on low achievers achievement and rate of retention.

1.3 OBJECTIVES OF THE STUDY

After identifying a broad research problem area and delimiting that area to the statement of the research problem, the following objectives of the current study were framed:

i. To find out the effect of mentoring on the academic achievement of the students at the secondary school level.

ii. To assess the effect of mentoring on the degree of retention of the students at the secondary school level.

1.4 HYPOTHESES OF THE STUDY

In relation to the objectives, the following hypotheses were formulated for testing:

H_1: There is no significant effect of mentoring on the academic achievement of the students at the secondary school level.

H_2: There is no significant difference between pre-test and post-test scores of the control group on the academic achievement of the students at the secondary school level.

H_3: There is no significant difference between pre-test and post-test scores of the experimental group on the academic achievement of the students at the secondary school level.

H_4: There is no significant difference in retention of post-test scores of the students at the secondary school level.

1.5 DELIMITATIONS

There were various constraints with respect to various resources. Therefore, the researcher tried to cope with the following aspects of delimitations stated as under:

i. Only district Chakwal was selected.

ii. One Public sector boys' secondary school was identified.

iii. Students of the 10th class were represented.

10

iv.   One core subject of 'Pakistan Studies' was chosen.

1.6 THEORETICAL FRAMEWORK

The current study aimed at finding out the effect of mentoring on the academic achievement of students at the secondary school level. Secondly to assess the degree of retention of knowledge of the students. The population of the study was all secondary schools and their students of secondary level in district Chakwal, a typical district of Punjab. The data was collected through pre-test, post-test,, and retention test. To analyze the data and mean scores t-test was used.

The following framework was developed: Box 1 represents the clients (students, mentees, marginal/ risk cases). Box 2 is assigned treatment, as process and supporting sessions (through teacher as mentor, using curriculum-based materials and methods), Box 3 reflects academic achievement including the degree of retention of knowledge and skills of communication.

Independent Variable	Mentoring	Dependent Variable
Students Marginal/ low achievers /risk cases	Treatment process/ support services	Academic Achievement & Retention
Box 1	Box 2	Box3
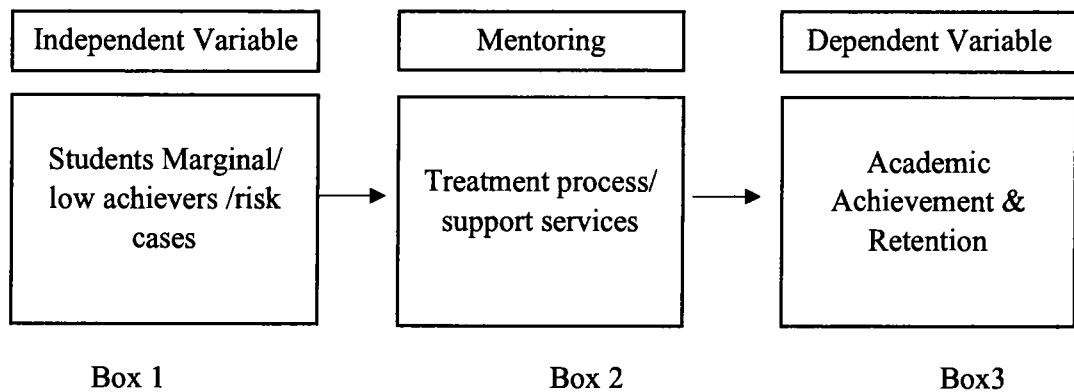
Fig: 1.1 Theoratical Framework

1.7 SIGNIFICANCE OF THE STUDY

This study will guide researchers and practitioners. Researchers will get a lead towards validation and replication of the current study and see possible avenues for in-depth research. Practitioners could integrate mentoring techniques to enhance the

academic learning and achievement of their students. The findings of this study are helpful for the policy makers, administrators and teachers to attain desired learning outcomes at secondary school level. This study provides guidance to teachers to incorporate mentoring services in their teaching and learning process at all levels, especially at the secondary school. The findings of this research study are also beneficial to provide knowledge, awareness and insight about mentoring services to all stakeholders.

Findings of the current study would help researchers to determine specific areas of mentor/mentee relationships to enhance the academic achievement of the students. Moreover, the effects of promotion to higher classes may also prove to be moderating this relationship which would help them to explore this moderating variable through moderated-mediation and mediated-moderation lenses in the experimental design.

As mentoring significantly affects the academic achievement of the students (Linn, et. al, 2011) which was also confirmed by this study, practitioners find ways to achieve the objective of high academic achievement of their students or academic institutions. Management of the schools which is responsible to implement mentoring programs for the students will essentially gain benefit from the findings of the current study by studying the impact of mentoring on the academic achievement of the students. They will further take guidance by studying the mentoring materials, technique, and designed to derive increased benefits established by this study.

Findings of the current study have provided evidence in educational processes in secondary schools through mentoring. This improvement has been witnesed in the United States, Europe, and Asia. The current study would serve students in the Pakistani context who seem inaccessible to this intervention to cope up with the academic problems they encounter. The current study guides teachers to develop practical

mentoring literacy and assist them to add into their teaching the mentoring practices for enhancing the academic achievement of students at secondary level. This study makes practitioners believe that mentoring is conveniently easily implementable practice in the normal environment of tough competition and constraints in complex globalization.

1.8 RESEARCH METHODOLOGY

A complete exposition of experimental design is beyond the scope of the present section. Here, the selected one design from the comprehensive treatment of the subject by Campbell and Stanely (1963) in order to identify the essential features, known a "true experimental" and what Kerlinger (2000) refers to as a "good" design. The chosen design is commonly used in educational experimentation. Here, two groups have been constituted by "randaomization".

It was truly experimental study. A theoretical framework was adopted. Marginal/ low achievers were independent variables as in box one (figure 1.1). Mentoring was offered as a treatment process/ support services (box 2) and academic achievement and retention formed dependent variables (box 3). All 137 boys Public Secondary Schools of District Chakwal formed the population. Medium and low achievers through pretest were randomly drawn as a sample. Self-prepared questionnaire in Pakistan Studies, comprising on units 1 and 2 in curriculm textbook of class 10th was used as a subject contents for investigation. Content validity and Cronbach alpha was used for determining reliability. One week training was offered to the mentoring teacher. Four week teaching was conducted for experimental group. No treatment was given to control group. The mentoring training was imparted according to CPD framework developd by DSD Lahore for training of teachers. The researcher himself worked as a master trainer of CPD framework. Twenty lesson plans as per CPD mentoring framework were designed and executed. The other parameters were common. The data

were collected through pre-test, post-test and retention test. To analyze the data and mean scores t-test were applied.

1.9 OPERATIONAL DEFINITIONS

Research-based rationale for deducing operational definitions in the study are given under:

1.9.1 Mentoring

Mentoring is individualized focused learning support offered in a formal and informal way, benefiting learner students and enriching the institution (McInnis et al., 1995). It forms a mutual choice or freedom resulting in effective and productive relationships between the teacher (mentor, experienced and expert) and the student (mentee a novice or a new learner) (Roberts, 2000). The mentor possesses a robust strong experience (Enrich, Hansford & Tennent, 2003). Aiming at maximizing performance (Whitmore, 2010). It is the key facilitating factor in "learning context", (Tovey, 1999). Transformation brings positive outcomes of accomplished learning, enhanced learning, and academic achievement (Linn, et. al, 2011).

Thus mentoring is a planned, deliberate, and designed process of mutual relationship imparting knowledge-based skills as a selected tool, for enhancing focused learning (Wang, 2018). Mentoring is establishing a deep relationship between the instructor and students (McGehee, Blue & Black, 2018). The term mentoring refers to treatment/intervention provided to the experimental group for four weeks by the mentor teacher.

1.9.2 Academic Achievement

Academic achievement is defined as a curriculum-based accomplishment for achieving educational goals (Golubchik, Hamerman, Manor, Peskin, & Weizman, 2018). It is usually represented by benchmarks, numbers, cumulative grade point

14

average (CGPA), degrees, diplomas, or percentages (Demir, Kilinc, & Dogan, 2017). In this study academic achievement is regarded as a score gained in the pre and post-test.

1.9.3 Mentor and Mentee

The term mentor refers to a person who provides help, guidance, and facilitation to the young learner (mentee). The mentor (a teacher, an expert, experienced and foresighted person), treats the young learner (a student, a fresh and novice one) empathetically. The relationship is shared, personal, and developmental leading to productivity and learnability. The mentor plays multiple roles (a knowledge bearer, a role model) to encourage reflections for achieving positive outcomes (Bond, 1999; Quinn et al., 2002).

Sufism provides a relevant example of a spiritual leader (mentor) and the spiritual disciple (mentee), as mentor-disciple relationships requiring a high commitment (Rokib, 2016). In sum, the positive relationship in the education process leads young learners to gain better scores. The term mentor refers to a person who provides help, guidance, and facilitation to the young learners in their learning to gain better scores. Mentees are learners of 10th-grade students in this study.

1.9.3 Retention

Retention carries many meanings: remain in the chosen line of learning, career building, and personality development. In the education process, it refers to continuous learning, even in case of repetition, until completion of the program. Here, retention refers to confirmation in the experiment and the degree of retention of knowledge, skills, and attitudes with a fair degree of understanding through the process, series of tests: pre, post and retention tests to demonstrate the quality of mentoring support in academic pursuit, through curriculum delivery. The mentor nurtures the mentee and

15

leads the young learners towards this end. All psychological and educational variables associated with dropouts (Darling, 2005), enhancing ingredients of engagement, (class attendance, completion of assignments/ projects, maintaining grades, reading depression and stress in the learning process) leading to academic performance and the criteria of such learning situation (Yeung, 2013; Knifsend, Camacho-Thompson, Juvonen, & Graham, 2018).

In short, retention learners, (specifically risk cases) offer a challenge to the mentor for keeping them in the system and educability. If a learner is lost the system is lost. In the mentoring process, the teacher is free to change the instructional strategy suited to the individual/ group needs. Its impact in immediate terms is measured by the pace of learning and the extent of retention of knowledge and skills of communication. Here, retention refers to the degree of retaining knowledge as seen through scores of retention test following post-test, after a span of one month break.

1.9.5 CPD Framework

Continuous Professional Development (CPD) is a continuous process of training and follow up of the educational personnel to change the classroom behavior of teachers. The objective is to enhance the quality of the teaching and learning process. Its impact has also been recently tested on the professional development of teachers at the primary level in the local context (Rafique, 2018) through an innovative intervention for professionalizing teaching behavior using the mentoring process. Thus CPD framework has been tested in school-based assessment and followed. It requires a set of organized activities and articulated through a specific course of instruction for enhanced qualitative instruction, teaching/mentoring. The term holds the currency of improved capacity building and delivery in an organized classroom environment.

Here, the term is defined as a Continuous Professional Development (CPD) framework for teachers to develop and implement new skills for the improvement of the students. This was introduced by the Directorate of Staff Development Lahore in Punjab for teachers' training and capacity building. Mentoring is the central idea of the CPD framework.

1.9.6 CPD Mentoring Areas

The term CPD mentoring areas as used in the study includes "taleemi" calendar, lesson planning, activity-based teaching, use of support material, student-teacher interaction, classroom management, students assessment, and homework of the selected units of the curriculum-based textual material.

1.10 SUMMARY OF THE CHAPTER

In the introductory chapter, the researcher has discussed the background of educational opportunities provided in Pakistan. The Constitution of Pakistan authenticates the right of the public to get free compulsory secondary education and to remove illiteracy. Various quantitative and qualitative parameters are used to measure the availability of educational opportunities in Pakistan. To strengthen the education system, student is basic unit to be used for evaluating educational objectives. Hence, a student needs to be treated as a primary source of achieving academic goals for whom the provision of learning support is a mandatory element. Academic achievement or academic performance, is an important indicator of educational success, consist of the achievement of short-term, medium, or long term academic goals set by the institutions, teachers, or students. Technically, academic achievement includes successful completion of a program, course, or a cycle of the education ladder. To achieve academic achievement, mentoring is used as an important approach to enhance the academic achievement of mentee students. Mentoring is a process of providing

17

individualized focussed learning support in a formal or an informal way where a person with a higher level of knowledge and more length of experience plays a supportive role to encourage the inducement in mentee person to learn more and more. Earlier to this process of mentoring, it is mandatory that the mentees have a lower level of the knowledge and a lesser length of experience than the mentor. As there is a proven significant and direct effect of mentoring on the academic achievement of the mentee students, the current study used a tailored mentee-mentor partnership to reap effective outcomes.

CHAPTER 2

LITERATURE REVIE

2.1 MENTORING

Mentoring is a process in which a person with more knowledge and experience trains a person with relatively less knowledge and experience (Wibrowski, Matthews, & Kitsantas, 2017). It is considered one of the most effective tools to enhance the focused learning in students (Wang, 2018). It can enhance the individualized focused-learning of students in both formal and informal ways while establishing a deep learning relationship between the instructor and his/her students (McGehee et al., 2018).

A body of research has yielded that mentoring might generate some positive outcomes in terms of enhancing the skills, talents, and knowledge of students (McGehee et al., 2018). More importantly, it is claimed that mentoring might not only play a role in enhancing knowledge and skills but might also motivate and retain depressed or loser students (Wibrowski et al., 2017). Student retention uplifts the lagging segments of educational and training institutes while creating more student achievement when combined with enhanced student knowledge, skills, and talents (Ho, Schweitzer, & Khawaja, 2017).

2.1.1. History of Mentoring

The word mentor actually originated from Homer's classic poem written around 800 BCE, The Odyssey refers to "professional training of a pupil by an experienced peer". In the poem, the mentor is an old man that remains ineffective most of the time but, afterward, the character Athena in the poem takes up the role of a mentor while training the young character Telemachus in desperate times (Hunter, 2018).

It is interesting to note that mentoring then emerged in the ancient culture as a Guru-Disciple relationship that was commonly practiced in Buddhism and Hinduism (Luck, 2016). Based on similar concepts, the discipleship principle was formulated in Christianity and Rabbinical Judaism. In Sufi tradition, the concept of 'Peer and Bait of Peer' also belonged to the idea of the mentor-disciple relationship. Even in history, all the formulated guilding systems were based on the concept of mentorship (Rokib, 2016; Slicker & Palmer, 1993).

When the concept of workplace equity emerged in the 20th Century in the United States (US), the term mentor became popular and its role to develop social capital was effectively-recognized and acknowledged (Garvey, Garvey, Stokes, & Megginson, 2017). Initially, it emerged as a remedy to remove the barriers for non-dominant groups to gain professional excellence. Then, with the advancement of business research, even trained and successful professionals were identified to be needy of some mentorship or instructions for further advancement in their success continuum (Wang, 2018). More interestingly, American vocabulary did not have the term 'mentorship' in 1970 because it became a part of everyday speech in America in the 1990s (Garvey et al., 2017).

2.1.2. Mentoring Techniques

Mentoring can be done through a wide variety of techniques. Aubrey & Cohen (1995) discussed several mentoring techniques that are commonly used in the academic and business world. These techniques are:

The first technique which mentor uses to develop a formal and informal relationship with his student or mentee is accompanying. It refers to the approach and offer a commitment to the mentee in a caring and empathetic way. In this process, the mentor takes a side-by-side role in the learning process with the mentee (Aubrey & Cohen, 1995). The use of empathy in teaching-learning process was first used by

Muslim philosopher Imam Ghazali in the 10th century and Ibn e Khaldoon in the 12th century. The term commitment is used as it is a research variable, generally used in studies.

Aubrey & Cohen (1995) states that the second technique is **sowing** which refers to the situation in which the mentee is reluctant to changes offered by the mentor and the mentor faces complications while trying to transform the mentee. At this stage, the mentor is normally concerned that whatever he/she teaches might not be comprehensible to mentees and they might take it negative or wrong. Sometimes, at this stage, the training or development offered by the mentor is meaningless or not even acceptable for the mentee. So, at this stage, the mentor works on sowing by sticking to his/her commitment while waiting for a situation to come when the mentee starts understanding or comprehending the knowledge delivered. Here, commitment refers to firmness.

The third technique for mentoring is catalyzing. There comes a stage in the learning process where changes dominate the learning and halt the learning process. This stage in psychology is called plaque where there is a pause. Then the learner gains momentum and learning escalates. Sometimes, the pressure created by change prevents the learner from development. At this stage, mentors focus on catalyzing to escalate the learning from change. This is often done by inducing a different level of thinking for learners and values are re-order to re-streamline the learning process in the mentee (Aubrey & Cohen, 1995). In psychology, plative stage is a sign of further learning.

Further, Aubrey & Cohen (1995) discuss sowing in which the mentor asks the mentee to practice the learning. In this stage, the mentor might ask the learner or student to show what he/she learned from the mentoring process. Some mentors also use an example of their own to show their own skill and activity to motivate the mentees. So,

this becomes a process of showing for both mentor and mentee further nurturing the learning capability of the mentee.

Finally, the mentor picks the ripe fruit by harvesting. In this stage, the mentor focuses on encouraging its mentee to reflect on the experience gained and to draw conclusions from the whole learning process. The mentor also provides feedback and takes corrective action wherever necessary to strengthen the knowledge of the mentee. At this stage, the mentor focuses on analyzing what the mentee has learned and how useful it is for the mentee.

Garvey et al. (2017) maintain that situation and context are the primary considerations for mentors while using different techniques. Some of the modern techniques used in educational institutes and commercial organizations can be traced back to traditional methods of guru-disciple relationships or the concept of guilds in the middle ages (Posner & Kouzes, 1993).

Posner & Kouzes (1993), established that the skill of mentorship is all about identifying and using the teachable moments so effectively that it pushes the learning horizons of mentee beyond limits. According to this, mentoring is not suitable all the time but those 'precious moments' are to be sought and utilized for mentoring. Also, they further emphasize that personal credibility is the key component of mentoring. If a mentor cannot be the perfect example of a mentee that it could seriously harm the learning process of the mentee.

2.1.3. Different Trends in Mentoring

The first and most rapidly emerging concept is 'multiple mentors' in which different mentors work together to train a mentee (Ensher, Heun, & Blanchard, 2003). In this way, the mentor does not only teach the mentee but also learn from each other (Garvey et al., 2017). From here, a bi-polar system emerged. Also, a mentor who

specialized in an area could be specifically chosen for that area to maximize the learning process of the mentee. This was later taken up by educational technology. Also, different mentors have different strengths and weaknesses that could maximize the knowledge and learning of students (McGehee et al., 2018). This culminates in knowledge-based skills.

In the current era of competition and globalization, corporations and educational institutes deeply feel the need to train their staff, teachers, and professionals to meet new challenges (Brockbank, 2006). For this purpose, they recruit mentors from different cultures, backgrounds, markets, and areas that are knowledgeable in their specified subject areas, markets, products, and the organization hiring them (Owen, 2011). They work typically as 'organization mentors' to clarify missions and strategies for the staff members and teachers in the case of educational institutes (Buell, 2004). Here, mission refers to vision, goals, and strategy as methods.

The other two common trends in mentoring are hiring technology mentors and work process mentors. A large number of institutions and organizations are work-process mentors to improve their efficiency and overcome the over-utilization of resources (Ensher et al., 2003). The process is on-sight training. Current cost and quality pressures of the modern era drive the organization to hire work process mentors who evaluate the ins and outs of the project and eliminate the unnecessary tasks to lower the overall costs of the organization (Garvey et al., 2017). In economic terms, it refers to CBE & CEA approaches. The second important trend is hiring technology mentors. Technology has transformed education as well as commerce. Educational institutes use cutting edge and state-of-the-art education technologies to enhance the learning of their students. Technology mentors enable the education institutes and commercial organizations to choose the best technology matching their needs and goals. They

conduct technology analysis and deliver the knowledge that directly helps the educational institutes and corporations to choose the best fit for them (Garvey et al., 2017). The term state of the art relates to professionalism and technology as a tool of efficient accomplishment of scholarship.

2.1.4 Relationships in Mentorship

In broader terms, mentoring has two main kinds of relationships which are formal and informal (Nelson, et. al, 2018). Formal relationships are formulated when an organization or administrative unit typically recruits a mentor, trains him/her in a typical area, and assigns the mentor to fill the specific needs of the staff training (Desimone, et al., 2014). In simple words, organizations fully guide and direct mentors and mentees to work on a special assignment and even assigns specific mentees to specific mentors to reach their goals (Mitchell, Eby, & Ragins, 2015). However, in the relationship of informal mentoring, contrary to the formal mentoring relationship, mentor and mentee have the flexibility to choose their area to work on or to even choose their own mentor and there is no such thing as mentor training, structured recruitment, and matching services (Bynum, 2015). One of the most common examples of informal mentoring relationships is the sales team member of a company who might often get trained informally by the salesperson of a client company. There are several other kinds of mentoring relationships too that are:

2.1.5 Situational Mentoring

These mentoring relationships are related to a specific context or situation in which the mentor and mentee work together for a specific purpose (Emerson & Berge, 2018). Some of the common examples of such mentoring relationships include a company hiring an expert to boost the motivation of its sales force in recession.

2.1.6 Supervisory Mentoring

In this kind of mentoring, the management team or supervisors directly come together as mentors and train their subordinates (Hussey & Campbell-Meier, 2017).

1. **Mentoring Circles:** Such circles are formulated by organizations to establish a community of practice to seek, share, and utilize tacit knowledge in the organization (Mwaura, Odero-Wanga, & Mulu-Mutuku, 2015). After choosing and owning the topic, team members meet in circles while choosing the best among them as a mentor (Desimone, et al., 2014). They carry out group discussions and learn from each other by sharing knowledge and capabilities (Emerson & Berge, 2018).

2. **Flash Mentoring:** As the name implies, it is a show term mentoring arrangement that is typically flexible and less taxing on the mentees (Garvey et al., 2017). Instead of long-term mentoring relationships, flash mentoring is focused on a single meeting with the mentor and mentee to address acute issues and problems (Desimone, et al., 2014).

2.1.7. Benefits of Mentoring

According to the finding of a meta-analysis of 112 individual research studies conducted by Eby et al. (2008), it was identified that numerous benefits of mentoring were found that were related to behaviors, health, relationships, motivation, and career. These benefits rely significantly on different functions performed by the mentor. According to Kram (1983), originally, functions performed by mentors are considered to be based on two factors that are: psychosocial support and career support. According to Kram (1983), psychosocial support included role-modeling, emotional support, friendship, and encouragement. Career support included help in goal setting and providing consultancy (Kram, 1983). A similar study by Scandura & Ragins (1993)

identified a third of role modeling as a separate distinct function of mentoring. A chain of studies of Nora & Crisp (2007) and Form, Schlichting, & Kaernbach (2017) identified knowledge transfer and creativity as fourth and fifth mentor functions respectively that might generate different contextual benefits for mentees. Range of benefits for mentoring are as follows:

Several organizations set up a career development mentoring program for its employees that enable the junior and less-skilled employees to bump up their careers (Desimone, et al., 2014). For example, junior and fresh employees gain the necessary knowledge and skills to reach a senior level of employment and they become ready to join the responsible positions. Also, it advances their personal career goals as they could seek a better profession or job in their own company or industry (Emerson & Berge, 2018). Also, mentoring helps align the personal goals of employees with organizational goals. As collaboration and alignment of goals continue, employees feel more engaged with the organization that enhances employee satisfaction and retention (Mitchell et al., 2015). This is a relative example of its early stage and forms a different dimension; purpose and method. Also, the audience is usually adults. Using mentorship, organizations can improve their relationships with these employees, and one-on-one guidance from senior leaders or mentors help to keep such employees retained and satisfied (Zhukovsky, Bruera, Meier, & Rodin, 2017).

Diversity Mentoring helps the firm to maximize the potential and output of its underrepresented employees that are usually ethnic minorities or women (Williams, Thakore, & McGee, 2016). Education and nursing are two industries that are highly dependent on these groups especially women (McGee, 2016). With diversity mentoring, the confidence of such groups can be boosted and they can be prepared for high-responsibility tasks and leadership roles (Bynum, 2015). With these diversity

groups motivated and retained, an organization obtains an influx of fresh and diverse ideas while looking at problems from new dimensions and perspectives (McGee, 2016). This also promotes intercultural dialogue and cultural awareness in organizations (Desimone, et al., 2014).

Reverse Mentoring enables the young and fresh blood to provide mentoring to the old and experienced employees in the firm (Emerson & Berge, 2018). It is because fresh graduates and young employees are well-acquainted with the latest market trends and new technologies that are crucial for business and educational success in the modern world (Nelson, et al., 2018). They can bring innovative and fresh ideas to the old and responsible employees keeping them in pace with the emerging market trends and future technologies (Desimone, et al., 2014). This creates more overall value for the organization.

Finally, Knowledge transfer mentoring is one of the key functions of a mentor. This is what mentors do (Emerson & Berge, 2018). They directly transfer their knowledge and skills to the mentee. Mentors do not only share their knowledge with the employees but also encourage them to share with others to obtain feedback (Mitchell et al., 2015). In this process, the mentee practices what he/she learns from the mentor to obtain feedback resulting in knowledge transfer among other employees or beneficiaries (McGehee et al., 2018).

2.2 ACADEMIC ACHIEVEMENT

Academic achievement refers to the extent to which a student has accomplished his/her educational goals (Golubchik et al., 2018). Academic achievement is usually represented by benchmarks or numbers such as cumulative grade point average (CGPA), degrees, diplomas, and percentages (Demir et al., 2017). In this perspective,

the researcher has used these dimensions to measure the academic achievement of their students.

There are various methods for measuring academic achievement. Examinations and assessments are conducted to check academic achievement but there is still a different opinion regarding the measurement of academic achievement among experts and researchers (Cunningham, Cunningham, Halim, & Yount, 2018). There are two important dimensions and perspectives that are considered while evaluating academic performance (Liu, Zhang, Cheng, Sun, & Liu, 2018). These are skills that come under procedural knowledge and facts that come under declarative knowledge. Also, there is again a difference of opinion among researchers and academic experts regarding the individual factors that might predict academic achievement (Waqas, Naveed, Aedma, Tariq, & Afzaal, 2018). These factors include motivation, environment, emotions, test anxiety, and mentoring (Akgün & Atıcı, 2017). Some of the nations have developed different indexes and benchmarks to measure academic achievement such as California in the US developed Academic Performance Index (Kim & Sunderman, 2005).

2.2.1. Individual Differences Affecting Academic Achievement

Individual differences are reported to impact the intelligence and personality of students that further define their academic achievement (Liu et al., 2018). IQ tests are conducted to identify the mental ability of the students and students scoring high on conscientiousness are supposed to be putting in more effort and having more motivation than other students (Ho et al., 2017). Also, a student with high IQ is considered to have a higher chance of academic achievements relative to other students. According to another meta-analysis conducted by Von Stumm et al. (2011), it was found that the enhanced mental curiosity which was a result of mentoring had a direct and association with the academic achievement of the mentees. Besides this, according to Bossaert et

al. (2011), the parents play the role of mentors for their children. They further argued that the children learned from their first mentors (parents) and develop their habits of learning by getting support from someone others. Therefore, as a result of this home-based mentoring process, the chances of learning are enhanced and resultantly their academic achievement is also enhanced as found by Akgün and Atıcı (2017).

Parent's academic socialization is a term that describes the influence of parents as mentors on the academic achievement of students. This informal socialization or mentoring has a direct impact on improving the skills, attitudes, and behaviors towards the school (Magnuson, 2007). Magnuson (2007) further states that the environment created by parents in their homes and parent's socio-economic status is directly associated with academic achievement of their kids. For example, highly educated parents are able to stimulate learning environments in their homes more effectively relative to others. This stimulation of environment has a direct bearing on motivating and encouraging students to make achievements academically while maximizing their learning process. Thus tools of education and technology function into an integrated whole.

Fam & Yaacob (2016) found in their research study that the quality of the relationship between parents and kids helps to develop self-efficacy among adolescent-aged students and it has a positive impact on their academic achievements. It is because parents are perceived as their mentors by kids in high-quality relationships. This results in an effective simulation of a home learning environment that directly supports the structured learning environment in schools. But, the philosophy of Rousseau in the the French and Swedish context of the 16th century of Europe stands in direct contradiction that parents cannot be a good teachers. Parents can be good critics of the system of the

school, but not good teachers or mentors of their children, as they are more emotional. This creates a knowledge gap.

Lassiter (1995) argues, for academic achievement, the first few years of student life are critical to obtaining mentoring either from their teachers or parents. School preparedness is essential for ensuring academic achievement in the future life of kids. For this purpose, language and social skills are needed that are directly acquired by students from their parents in home learning. If parents play the role of mentors in those early years to develop social and language skills in their kids, it helps the kids to adjust to academic expectancies.

There is another factor that could affect academic achievement that is physical activity in students. Tomporowski, Davis, Miller, & Naglieri (2008) write that neural activity in students is directly enhanced by physical activity and sports. Moreover, exercises enhance executive brain functions that improve the attention span and working memory. The researcher further recommends that academic mentors should focus on improving the physical activity for students to improve their academic achievement.

2.2.2. Non-Cognitive Factors Affecting Academic Performance

Heckman et al. (2006) state that non-cognitive factors involve attitudes, behaviors, and strategies that improve academic achievement and professional success. This set of skills include two main factors which are motivation and self-control that help to develop self-efficacy, goal setting, emotional intelligence, and determination leading directly to academic achievements. The concept and impact of non-cognitive factors on academic achievement were first introduced by Bowles and Gintis in the 1970s (Heckman et al., 2006). Before that, teachers and mentors mainly evaluated students through tests and quizzes or other cognitive measures. After the 1970s, non-

cognitive factors started gaining significant popularity because they were better in explaining the academic achievement and performance of students (Heckman et al., 2006). The two major factors are explained as under:

Motivation is described as reasoning driving the actions of a human (Friedman & Mandel, 2011). Friedman & Mandel (2011) further write that highly motivated student to achieve academically have intrinsic goals instead of extrinsic goals. Also, those students that get motivated to improve their current or future performance have a higher chance of academic achievements relative to students having low levels of motivation. Desimone, et al. (2014) made an interesting point by arguing that the primary job of the mentor is to enhance the motivation among the students. Technology in education took it further in the teaching-learning domain.

Friedman & Mandel (2011) further argue that motivation creates a high need for achievement among students that push them to achieve higher academic performance. Downes (2015) made an interesting point by writing that dietary habits directly define the motivation of students. For example, bad dietary habits lead to poor motivation in students. Further, Ho et al. (2017) write that mentors should specifically focus on the dietary habits of students to improve their motivation that further translates into academic achievement.

Self-Control is the second major non-cognitive factor in an academic setting that is directly related to self-regulation, self-discipline, impulse control, and delay of gratification (Baumeister, Vohs, & Tice, 2007). Baumeister et al. (2007) further define it as the power of students to alter and control their own responses and keeping them in line with the ideals, values, morals, and social expectations to achieve long-term goals. In self-control, the students have the ability to prioritize long term goals over the temptation of short-term impulses. Self-complete questionnaires are used to measure

self-control in students and the scale that is used in this survey was developed by Tangney, Baumeister, and Boone (2004) (cited in Baumeister et al., 2007).

Gutman & Schoon (2013) conducted a longitudinal study comprising of the marshmallow test. In this study, the researchers found that there was a relationship between higher academic achievement and time spent by students while waiting for the second marshmallow. Through this test, it was found that those students that had a higher level of self-control were able to perform more effectively academically relative to others. This study has a limitation as its findings only applied to participants having marshmallows in plain sites without any distractions. Higher levels of self-control promote effectiveness in the people such as self-discipline that enables the students to make decisions effectively and prioritizing their effort to achieve higher academically. The study of Hannon (2014) higher levels of self-control have a positive relationship with higher GPAs of college-level students.

2.2.3. Extracurricular Activities and Academic Achievement

Higher academic performance is found to be directly related to organized extracurricular activities (Abruzzi, Lenis, Romero, Maser, & Morote, 2016). It is because organized extracurricular activities enhance school engagement, class attendance, grades, and postsecondary education for students. Also, empirical studies have shown that they dramatically lower the depression and drop-out rate among students (Darling, 2005). Therefore, Form et al. (2017) argue that mentors should focus on extracurricular activities in mentees to improve their engagement, attendance, and performance while reducing their depression and stress of the learning process.

Extracurricular activities are also found to have positive developments in young students (Mahoney, Taylor, Kanarek, & Samuel, 2005). For example, those students that engage in high school sports have also been found to have strong academic performance relative to other youth belonging to urban areas (Yeung, 2013). But there

are also incidents of drug usage among students that become too much obsessed with extracurricular activities to improve their athletic performance (Eccles & Templeton, 2002). This could harm academic achievement in the long run. This is related to the cultural situations.

There are also certain controversies about positive relationship between extracurricular activities and academic performance. It is because the practice of extracurricular activities is confusing and not always clear (Steinmann, Strietholt, & Caro, 2018). Also, there are a large number of moderating and mediating variables that might affect the association of academic performance with extra/co-curricular activities (Carolan, 2018; Moghadam & Ardakanian, 2018). Some studies such as the study conducted by Knifsend and the Collegues (2018) also recommend that engagement in extracurricular activities promotes academic achievement of the connected students. Equally other studies have found that extracurricular activities were detrimental to academic achievement especially when students got too much indulged in sports (Meier, Hartmann, & Larson, 2018). In simple words, there are a large number of variables that come into play while analyzing the impact of extracurricular activities on academic performance (Aumètre & Poulin, 2018).

A range of the variables that affect the relationship of extracurricular activities and academic achievement include demographics, family influence, individual differences, resources at hand, and motivation (Knifsend et al., 2018). For example, students with higher socio-economic status are more likely to engage in extracurricular activities relative to other students (Meier, Hartmann, & Larson, 2018). Also, family and peer relationships reveal the positivity of relationships of academic achievement with positive participation of the students in co/extra-curricular activities (Aumètre & Poulin, 2018). In order to better understand this significant and direct relationship of

33

co/extra-curricular activities with academic achievement, some of the above-mentioned factors need to be taken into account.

In short, most of the research asserts that extracurricular activities have a positive relationship with academic achievements of students. But, in order to understand this relationship better, other moderating and mediating variables deserve consideration. They would give us a better explanation of the relationships. In the age of technology, higher socio-economic groups tend to be self-assertive and isolated, while lower socio-economic groups or disadvantaged groups have to struggle in the labour market to support their families. These are realities of life.

2.3 RELATIONSHIP OF MENTORING WITH ACADEMIC ACHIEVEMENT

It is important to note that literature always championed the need for mentoring to improve academic achievement in students. The majority of the research studies have found that academic achievement among students of all levels could be improved through mentoring (Akgün & Atıcı, 2017; Kozina, Wiium, Gonzalez, & Dimitrova, 2018).

2.3.1. General Studies

Larose, Duchesne, & Châteauvert (2018) conducted a study with two-fold aims: to explain the relationship between mentoring relationship quality (MRQ) and academic achievement and to explore the moderating and mediating impact of student mastery goal orientation on these relationships. More importantly, they specifically included students that were academically at-risk as mentees while their teachers served as mentors. A total number of 115 students participated in a one-year mentoring program. Academic improvements among students were recorded at the start and end of the program. The study yielded a positive relationship between mentoring

relationship quality (MRQ) and academic achievement of students. Academically at-risk students also experienced improvements especially when their teachers adopted the role of mentors.

Chizhik, Chizhik, Close, & Gallego (2018) purposed a study to develop a model which they named Shared Mentoring in Learning Environments (SMILE) exclusively for teachers and students together. The basic purpose of this model was to promote shared understanding among teachers and students to improve the academic achievement and progress of students. Also, the basic purpose to develop this model was to enable the teachers to improve from deploying the ancient or traditional mentoring models by providing an alternative and contemporary mentoring model to promote shared learning.

2.3.2. Studies Concerning Students at Adolescent Level

Chan, et al. (2018) examined the academic development of adolescents participating in the Child Development Fund that was a program involving mentoring components for children's development in Hong Kong. A total number of 902 participants belonging to low socio-economic backgrounds were engaged in the study that was engaged in a 3-years program. The impact of mentoring on behavioral aspects, health, academics, cognitive capacities, and social development was measured and analyzed. It was found that those participants that engaged in the mentoring programs had superior academic, social, and cognitive development relative to other children and they had fewer behavioral and health issues relative to non-participants. The study specifically highlighted that higher levels of mentoring significantly improve the academic learning, motivation, and progress of children and they perform better than the children who did not participate. Moreover, they also found a direct significant effect of mentoring on various (almost all) dimensions of attitude, behavior, social life, and academic performance.

Moreover, Larose et al., (2018), examined the adoptive only: hierarchical compensatory and hierarchical condition along with the attitude, behavior, social life, and academic performance of the respondent youngsters in getting the effect of these variables on their academic adjustment. The three stated terms were potential contributions of mentor support while support from both teachers and parents was considered in this study. The researchers used data from Big Brothers Big Sisters (BBBS) of Canada's community mentoring program. Their sample included 427 participants that were youngsters with an average age of average age 9.8 years while 64% among them were girls and 56% were white. It was found that mentoring programs with combined support from teachers and mothers of youngsters had significantly affected academic-related attitude, self-efficacy, seeking assistance, and problem-solving skills among target students. The study suggested that the impact of mentoring programs on the academic adjustment of at-risk students could be maximized if parents are involved along with teachers to provide support. But, the findings are relative depending on educational level of the parents and cultural climate. Also, high population of students in western socities generally form one parent climate.

Rhodes, Grossman, & Resch (2000) examined the conceptual model of mentoring that described the relationship of mentoring relationships with the academic achievement of adolescents. That conceptual model was hypothesized to contain relationships that were mediated by parental relationships. They compared this model with the alternative model where parental relationships were analyzed as the dependent/outcome variable rather than a mediating variable. In their study, they involved 959 adolescents whose average age was 12 years and all the respondents were those who applied to BBBS programs.

In the study of Rhodes et al. (2000), the participants were involved in two groups with one group containing the experimental participants while the other contained the control participants. It was found that the hypothesized model was effective and provided more clear explanations about the effect of mentoring programs on adolescents' academic achievement relative to its other alternative program. It was found that improvement in parental relationships maximized the impact of mentoring on academic achievement resulting in reductions of school absences and in the improvement of scholastic competences of participants. Interestingly, this study did not measure the direct effects of mentoring on academic achievement instead found the effects mediated in the light of parental relationships.

2.3.3. Studies Concerning Students at Secondary Level

Enhanced self-esteem and positive connection of school students with their alma mater, peers, and family could protect against academic risks and poor performance (King, Vidourek, Davis, & McClellan, 2002). In their study, King et al. (2002) reported findings from the first year of a multidisciplinary mentoring program is known as Healthy Kids Mentoring Program. They reported that students of 5th grade of Midwestern public school showed significant improvements in building positive abilities to build relationships, enhancing self-esteem, setting SMART goals, and getting academic assistance from peers and teachers. In the post-test, significant improvements were noticed among participants in terms of their self-esteem and connection to school, peers, and family. Posttest data also showed that mentored students had greatly reduced their academic risks and they were less depressed relative to other students. They also found a dramatic increase in the academic performance of these kids.

Ullah, Tabassum, & Kaleem (2018) analyzed the impact of peer tutoring of biology students on their academic achievement. The study also purposed to identify

the effects of peer tutoring in terms of knowledge, application levels, and comprehension in the cognitive domain of Bloom Taxonomy. A total number of 40 male students at the secondary level of Khyber Pakhtunkhawa were engaged in the study. The findings from their pretest and posttest data collection revealed that the academic achievement of the experimental group was improved through peer mentoring. It was concluded that it could be an effective method to teach improve academic success in any other course as well. Here, a peer group is learning from a homogenous group and not identical to mentoring. It is a kind of reflective learning, how different groups learn, feel, and interpret.

Grossman, Chan, Schwartz, & Rhodes (2012) studied the effectiveness of school-based mentoring to enhance the academic achievement of 1,139 students in BBBS programs that belonged to 4th to 9th grade in schools and belonged to diverse ethnic and racial backgrounds. It was found that those students that completed the mentoring program experienced significant improvement in academic achievement relative to students that terminated prematurely from the program. It was also found that those students who terminated had significant negative impacts.

Gutman & Midgley (2000) studied the impact of parents and teachers mentoring to enhance the academic achievement of 62 African American school students that were the victims of poverty. Firstly, the researchers examined the impact of psychological, family, and school factors on the academic performance of students' GPAs during their transition to middle school. Students were engaged in surveys while their parents were engaged in interviews. The researchers found that students who were elevated to middle school by passing out elementary level experienced a significant decline in academic performance as they had low GPAs. The researcher explained this decline to be the result of poor mentoring of parents and teachers. They also found that students feeling

more academically efficacious had relatively higher GPAs relative to their counterparts. Thirdly, they found that family and school factors such as relationships and mentoring affected students' academic achievement and learning progress. The researchers argued on the basis of their findings that an informal mentoring strategy involving both the parents and schools might be deployed during the transition of African American students from elementary to middle school to ensure their academic performance.

In an earlier study, Thompson & Kelly-Vance (2001), researchers argued that students whose parents did not go to college had little chance to reach secondary levels or college levels relative to students whose parents went. Using this phenomenon, they stated the idea of natural mentoring that occurs between parents and their kids regarding academic achievement. Students see their parents, peers, relatives, and teachers as role models and they take advice from their parents in terms of their academic endeavors. They suggested that natural mentoring plays a promising role in ensuring the academic achievement of the students.

In another study, Thompson & Kelly-Vance (2001) tested if there were any differences in this natural mentoring support received among different generations i.e. early admissions, continuing students, and the students of non-college goers. It was found that those students whose parents went to college and had some educational attainment were likely to achieve more academically relative to other students. They also found that such students gained more natural mentoring from their parents as compared to the students whose parents had a little attendance at secondary level education or educational attainments. The study of Thompson & Kelly-Vance (2001) highlighted the importance of mentoring in enhancing the academic achievement of the target students.

Rivkin, Hanushek, & Kain (2005) examined the mentoring role of teachers and schools in enhancing the academic achievement of students. They used a teacher quality identification from the UTD Texas Schools Project that was based upon the academic performance of the students. It was used to judge the effectiveness of mentoring quality of students and teachers. The results indicated, that those students who receive a high quality of teacher mentoring make significant academic achievements in reading and mathematics. They also found that the mentoring quality of teachers depended on their education and experience. They also argued and found that teacher mentoring quality defined the school quality and further academic achievement of students.

There are also some studies that found conflicting results relative to the above studies. Only one study is presented here as an example. Heppen, et al. (2018) purposed their study to evaluate various effects that mentoring laid on the students of high school who were perceived to be at-risk. The researchers noticed that the dropout rate in high schools was increasing despite the increase in graduation rates. They specifically focused their study to investigate the impact of Check & Connect, an individual mentoring program, on 553 at-risk students of grade 8 and 9. Participants were randomly assigned to this mentoring program for three years. It was found that the Check & Connect program did not affect the academic achievement of the students nor it had positively contributed towards the progress of at-risk students. Moreover, it could not address the drop-out rate of at-risk students.

2.3.4. Studies Concerning Students at Higher Level

Favero, Moran, & Eniola-Adefeso (2018) confirmed similar findings at higher academic levels by analyzing the relationship between peer mentoring and academic achievement of chemical engineering Ph.D. students at the University of Michigan. It was found that peer mentoring does not only improve the academic achievements of

the Ph.D. Students but also decreased the stress levels of students that is one of the major threats to academic progression at Ph.D. Level.

Salinitri (2005) conducted a two-year study in which the researcher evaluated a formal mentoring program to examine its effect on student achievement, retention, and satisfaction at the first-year level of university students. This formal mentoring program involved voluntary participation. Mentors were drawn from senior faculty that took additional credit classes at Ontario Secondary Schools to sharpen their mentoring skills. The researcher found that indicators of academic achievement, retention, and satisfaction in the experimental group who participated voluntarily in the formal mentoring program were higher than the control group. It was concluded that formal mentoring could enhance the academic satisfaction and retention of students.

Rodger & Tremblay (2003) also investigated examined the effects of a one-year mentoring program on the academic achievement of first-year students. The participation of students in this mentoring program was also analyzed to examine the differences in their academic achievement, retention, and motivation. They took a sample of 983 respondents that completed the Academic Motivation Inventory (AMI) and agreed to provide their final grades. A total number of 537 respondents were engaged in the one-year mentoring program while the remaining participants or respondents were considered as the control group. It was found at the end of the mentoring program that those students who participated had considerably higher final grades relative to the control group. Although they found no effects of mentoring program on retention, noticeably, those students that scored higher on the anxiety scale in the experimental group still held higher grades relative to students that scored lower on the anxiety scale in the control group. Also, the worse performance came from control group participants bearing the highest anxiety levels.

Campbell & Campbell (1997) evaluated a university student/faculty mentoring program to analyze its effects on academic motivation, performance, and achievement. The study involved a total number of 339 undergraduates that were attached to mentors using a matched pair design. The experimental group was also paired with non-mentees based on their GPA, enrollment status, ethnicity, and gender. In these findings, it was revealed that mentored students had relatively higher GPAs while they covered more units per semester and had lower dropout rates relative to non-mentees. They also found that GPA (that was an indicator of academic performance), retention, and motivation had positive correlations with mentoring while they had little to no relation with gender and ethnicity of the mentor or student or both.

Robnett, Nelson, Zurbriggen, Crosby, & Chemers (2019) conducted a mixed-method study to examine the mentoring relationships with academic achievement among ethnically diverse students in the areas of science, technology, engineering, and math (STEM). The basic purpose of this study was to analyze whether mentoring programs had a diverse or varying effect on ethnically different students or not. It was found that mentoring programs enhance the academic progress and self-efficacy of students from diverse ethnic backgrounds equally and the impact of mentoring was not moderated by gender or ethnic background.

Livingstone & Naismith (2018) argued that academic mentors always played a diverse and heterogeneous role. They further argued that mentoring relationships were formally created unintentionally among teachers and students but their effectiveness and impact on academic achievement depended upon the experience of teacher and delivery of mentoring to students. In their study, the authors reflect on the pedagogic evolution of mentoring while examining the response of students to subsequent changes in mentoring at the undergraduate level. They specifically focused on evaluating the

role of past, professional, and curriculum-based mentoring models to shape students' experiences.

The study of Livingstone & Naismith (2018) also focused on different models to be applied together rather than considered as separate and diverse approaches. By using mixed methods, the researcher introduced a contemporary mentoring model based on past, professional, and curriculum-based mentoring models on target participants. Faculty or mentors' responses were gathered through structured in-depth interviews. Data related to the impact of this contemporary mentoring model on students' experiences were gathered through questionnaire surveys. It was found that multifaceted mentoring models combined together shaped the students' experiences positively while enhancing their academic motivation and progress. They found a dramatic improvement in personal and academic development by applying multifaceted mentoring models to shape students' experiences.

Chizhik et al. (2018) engaged 29 students and teachers in SMILE while also engaged a control group of 29 students and teachers who used traditional mentoring techniques. After completing the one-year post-baccalaureate credential program, all the participants were engaged in a teaching efficacy questionnaire. Also, in the last month of the program, focus group surveys were conducted by engaging all the teachers and students. It was found that those students that participants in SMILE had developed more efficacy and gained significant academic motivation and progression relative to the control group. On the other hand, the instructional and mentoring skills of teachers who participated in SMILE were improved significantly relative to the control group. The researchers concluded that mentoring programs centered on shared learning could enhance the academic efficacy and progress of students relatively more than traditional mentoring programs.

Moschetti, Plunkett, Efrat, & Yomtov (2018) conducted an evaluation of the university peer mentoring program to enhance the academic progress and achievement of Latina/o college students. They collected data for three years while engaged 458 latina/o students that were having mentoring. In this study, a control group was also engaged containing 86 latina/o students that were not having mentoring. They found that mentees having mentors had developed significant emotional and academic progress relative to the control group. They also suggested on the basis of their findings that university peer mentoring programs could be used as an effective tool to promote social capital.

2.4 MENTORING, ACADEMIC ACHIEVEMENT AND CAPACITY BUILDING IN RESEARCH: LOCAL STUDIES

Systematic studies on mentoring in Pakistan (local) context are scares. Realization of its potential role in scholastic attainment or its impact on research capacity building has not received due attention in the academic community. A few studies have been located in the past few years. A brief rundown of three relevant ones is presented in this section.

2.4.1 Mentoring in Higher Education for Quality Enhancement

Farooq (2016), stressed the role of applied research as the cornerstone in the developing world's economy and society. A review of 100 plus HEC, Higher Education Commission Centres identified critical hurdles to research as a vital basic step towards improving its quality. Some included: lack of finances and resource distribution, the quantitative and qualitative dimension of research assessment, the interaction between researcher and scientific policymakers, as a threat in research, as a trend to evolve efficient use of research results. Here the role of the university (both public and private) is called for to organize and present their research: both at global criteria and local

demands and challenges. HEC's role in monitoring, mentoring, and disseminating research results in public policy direction, improving transparency concerning its current situation and challenges/priorities being faced. This was an economic dimension that bears an impact on higher education research.

2.4.2 Impact of CPD Mentoring Framework

Rafique (2018), investigated the impact of mentoring on the professional development of teachers at the primary level in tehsil Kot Momin, district Sargodha. The researcher examined the perceptions of primary school teachers regarding the mentoring of teachers through District Teacher Educators (DTE's) and judged their professional development, through the mentoring process. A group of 581 teachers working in 225 primary schools formed the population of the study. 250 teachers working in 99 public schools were sampled in the study. As a descriptive survey, 35 statements were constructed. 52% of returns yielded that mentoring played a vital role in quality improvement. DTE's work on CPD framework on a school-based assessment of organized activities, and followed by specific instruction of CTSC. DTE's mentoring system and record-keeping of professional events in the cluster of enhancing the quality of education forms a step forward towards establishing a mentoring institution.

2.4.3   Mentoring in Research

Kinai (2006) did an intensive study (M.Phil. at AIOU) in mentoring research in higher education in Pakistan and developed a model in this field. The researcher measured the attitudes of supervisors in terms of research supervision and the experience of supervisee students. The prime objective of the study was to evaluate the role of the advisors in helping students during thesis writing. The study sampled 60 participants (30 advisors as mentors and 30 students as mentees) from three public

sector universities (Quaid e Azam, Punjab, and ARID Rawalpindi) in two common disciplines (biology and social sciences) and a set of agriculture sciences from ARID University. Two sets of questionnaires (one for mentors and the other for mentees) followed by an intensive interview schedule formed the tools of data collection. The questionnaire contained a critical cluster: acceptance, accomplishing preparatory stage, initial assistance of a supervisor, problem identification, research design, a dry run of instruments, data analysis plan, writing a research report and conducting research viva, student career. Also critical stages (keeping research momentum, motivation, and risk stages addressed). Based on conclusions drawn from empirical data the study recommended two sets of recommendations: micro and macro levels. At the micro-level academic aspects between mentor and mentee at the departmental level at each critical stage and policy design and instituting mentoring service at university (institutional level was formulated). Finally, the researcher generated two models: model (A) presented the conceptual academic model of mentoring research in higher education, and model (B) design an operational academic model with a set of rational and guided steps.

2.5 SUMMARY OF THE CHAPTER

Mentoring is considered an effective technique to provide student learning support to the student. This supports results in the enhancement of a student's academic achievement. In mentoring, individualized focussed learning support is provided either in a formal or an informal way. In mentoring, an individual with more expertise provides knowledge to a less experienced individual. One is an expert and experienced (mentor) and the other is a young and novice learner (mentee). Substantial, empirical evidences were reviewed that mentoring not only plays an effective role in enhancing the academic achievement of the students but also helps them to retain various

information (retention of knowledge and skill performances). Academic achievement or academic performance refers to the achievement of short-term or medium and long-term academic goals. In the broader sense, these goals may include educational goals set by the institutions, teachers, or students. Normally, academic achievement includes successful completion of a program or a course. It is generally measured through examinations or continuous assessments. Academic achievement is comprised of academic success, academic productivity, and impulse control, and knowledge retention. In academic success, a student's percentage of written work completed in compulsory and optional subjects (regardless of accuracy) relative to other classmates is estimated. Academic productivity means the consistency and quality of a student's academic work regarding learning new material (i.e. novel concepts), and productivity: writing skills, speaking skills, and retention & mastery skills. Impulse control refers to a student's frequency of accurately following teacher(s)' directions, instructions, and/or class discussions during both the large-group (e.g., whole class) instructions and small-group (e.g., reading group) instructions. Degree of knowledge retention means to remember and reproduce knowledge with the understanding gained during the learning process. For effective mentoring, one must need to ensure that mutual choice of selection or real freedom of choice is present for the teacher becoming 'mentor' and the student being 'mentee. A mentor helps and supports for academic growth and personal development of the mentees. A mentor is always a multitasked person and he/she can either be a coach, guide, trainer, or counselor at the same time. A teacher or research adviser requires a high degree of accomplishment, endurance, academic and professional commitment, and ethical standards. He/she may be calm and does not give away feelings or show nervousness. He/she also has the ability to sense others emotions and try to listen, understand people's thinking or feeling.

CHAPTER 3

METHODOLOGY

This chapter deals with the description of the research design and procedures followed in the study. The intent of this study was to investigate the effect of mentoring on the academic achievement of the students at the secondary school level. This chapter is divided into following sections: design of the study, population & sample of the study, procedure & treatment, data collection, and data analysis. Briefly, this chapter deals with the methods and procedures adopted in the study.

3.1 DESIGN OF THE STUDY

The study is based on the experimental method. The contents of this study are related to quantitative results. In this context, the current study used a true experimental design to achieve objectives set by the researcher. The true experimental research design helped to evaluate the effect of mentoring on the academic achievement of the mentee students. The experimental group was randomly formed on the basis of pre-test scores. In this step of the research, optimal efforts were put to select participants of the experimental group and control group by using a random selection procedure where the participants had equal chances of being assigned to either of the groups. Treatment was given to one group i.e. experimental group (Creswell, 2009).

Explicit illustration of the true experimental design is given below:

Experimental Group: R————O————X————O
Control Group: R————O——————————O

3.2 POPULATION OF THE STUDY

The population of the current study consisted of 137 Government Boys' Secondary Schools of the district Chakwal and 46,189 students enrolled in the Government Boys' Secondary Schools of the district Chakwal (School Census, 2018).

3.3 SAMPLE OF THE STUDY

Unit based sampling procedure was employed. The sample of the study was Government Boys Secondary School, Malikwal, District (Chakwal) having 93 students of 10th class enrolled in the school. At the first stage, a pre-test was administered to all 93 students to get raw data. At the second stage on basis of the pre-test scores, forty (40) low achievers were identified. Out of forty low achievers control and experimental groups (20 students in each group) were formed randomly.

According to Creswell (1998) and Morse (1994), an appropriate number for an experimental study ought to consist of an average number of 15 subjects/participants in social sciences. Therefore, the researcher was confident that selecting twenty students as members of the experimental group was appropriate to draw valid and reliable results, as per the design of the study. The procedure so adopted eliminated the possibility of systematic differences and the outcomes could be attributed to the experimental treatment (Keppel, 1991).

3.4 PROCEDURE / TREATMENT

The researcher got permission from the district Chakwal Education Department and sought consent from the concerned teachers of the subject of Pakistan Studies. The teachers of Pakistan Studies teaching to the 10th class were asked to provide a list of students enrolled in the 10th class. A self-developed pre-test in the subject of Pakistan Studies was prepared. The pre-test was included on two units of the Pakistan Studies

subject. According to the criteria for the selection of teachers who had to teach the students, regular faculty members of Government High School Malikwal (Chakwal) were selected. They possessed almost matching academic qualifications; (master's degree in Pakistan Studies). Moreover, teachers were also holding equivalent professional training (B. Ed degrees), parallel teaching experience in the subject of Pakistan Studies at the same level. The teacher who acted as a mentor of experimental group of students was provided relevant/required training for one week according to the continuous professional development (CPD) mentoring framework.

The main purpose of mentoring training was to fulfill the professional development needs of Pakistan Studies teacher within the CPD framework. The researcher trained the Pakistan Studies teacher. These CPD mentoring areas are comprehensive for the professional development of teachers (detail of the mentoring CPD framework is annexed). The Pakistan Studies Teacher was trained on these following CPD mentoring areas:

i. Taleemi calendar ii. Lesson Planning iii. Activity-Based Teaching and Learning

iv. Use of Support Material   v. Interaction with Students vi. Classroom management

vii. Students Assessment viii. Home Work

3.5 IMPLEMENTATION OF MENTORING INTERVENTION

The researcher himself is a master trainer of the CPD framework developed by the Directorate of Staff Development (DSD) Lahore for teachers' training. The researcher has cascaded many pieces of training to government school heads and teachers at the Punjab level. So the mentor teacher of the Pakistan Studies subject was provided mentoring training for one week by the researcher according to the continuous professional development (CPD) mentoring framework. The mentor teacher was guided to incorporate mentoring support into teaching-learning process in the

classroom. The selected mentee students (experimental group) were provided mentoring teaching in the Pakistan Studies subject by the mentor teacher for four weeks. Treatment was provided only to the students of the experimental group. The mentor teacher taught two units of Pakistan Studies for four weeks to the experimental group. The said teacher prepared 20 lesson plans according to the following CPD mentoring framework areas: Taleemi calendar ii. Lesson Planning iii. Activity-Based Teaching and Learning iv. Use of Support Material v. Interaction with Students vi. Classroom management vii. Students Assessment viii. Home Work.

The lesson plan and teacher training schedule detail are annexed at Annexures-II & III respectively. On the other hand, the control group was taught for four weeks through the traditional approach during the said period. After four weeks' treatment to the experimental group, a post-test was conducted on both the control group and the experiment group. Similarly, retention test was conducted on both groups after a pause of one month to check the retention scores. The amount of the time was maintained uniform for the pre-test, post-test, and the retention test.

3.6 RESEARCH INSTRUMENT

Pre-test, post-test and retention test was used in this study. The contents of the test were based on curriculum and textual material. The test items cover the significant dates and events constituting real understanding of the historical events. The items were determined at three levels; easy, medium or difficult. The subject Pakistan Studies was core component of the study.

3.6.1 Pre & Post-Test

Pre-test and post-test were designed using Bloom's revised taxonomy (Nässtrōm, 2009); focusing on the cognitive domain. The initial draft contained a large size of items (over 75). Finally, 50 items test were used, following pre-testing and

expert opinions annexed at (Appendix-I). The first two units of the Pakistan Studies subject of grade 10th at secondary level were chosen. The teaching schedule was followed. The topics were from the first two units of Pakistan Studies of grade 10th book.

3.6.2 Validity

Validity was determined on various dimensions. Content validity was used in test construction followed by face validity. Internal validity and external validity are related to experimental and environmental factors. Content validity is related to experimental procedures, treatment assigned, experiences gained by the subject during the course of the experiment. The guidelines suggested by Creswell, (1998) were closely followed by the researcher. This included: history, events occurring during the experiment to both groups, maturation (pace of changes gained over time), regression (regressed through sampling procedure, engaging homogenous groups), selection (marginal and low achievers sampled), maturity (only normal groups taking the course included and drop out cases were checked), diffusion treatment (separate and silent treatment assigned), testing (pre and post-testing kept apart in time reference), instrumentation (the same instrument maintained). External validity is related to the external environment, statistical treatment of the data of both groups, and drawn accurate inferences. Creswell's criteria for external validity was employed. They were assured by selecting subjects of similar academic attainment, replication of the study, and time-bound experiment, spread over four weeks.

3.6.3 Reliability

A pilot study with 20 low achievers of 10th-grade students of another group of students in the same locality having similar cultural characteristics was taken in this pilot study. Government Secondary School Akwal district Chakwal was chosen.

Students were randomly selected using the same instrument. They belonged to another institution, not forming the sampled institution. Cronbach Alpha was used to measure the reliability of the testing instrument. The value derived was 0.72. It was regarded as appropriate, beyond 0.7.

3.7 COMPLIANCE OF ETHICAL APPROVAL

The researcher complied with ethical approval from the mentee students before implementing mentoring intervention for them. An informed consent form was provided to each mentee student. The consent form explained the time duration and possible benefits. However, no harms were present because mentorship was aimed at enhancing students' academic achievement. The selected mentee students signed the consent form after which intervention was implemented. The participants of the experimental group were the students who had gained lower scores in pre-test data.

3.8 DATA COLLECTION

In this research study, the data were collected through the administration of pre-test, post-test, and retention test to both control and experimental groups. The mentoring intervention was sustained for four weeks. After the completion of four weeks of treatment (mentoring), immediately the post-test was administered to obtain post-test scores from the control and experimental groups.

After one month interval, the post-test was again administered to control and experimental groups to check the retention of scores among the students. The purpose was to measure their ability to maintain knowledge level and the degree of their retention in terms of scores.

3.8.1 Retention Test

The student's retention test was arranged by administering the post-test to both control and experimental groups after one-month intermission in order to see the effect

53

of the mentoring intervention on academic achievement in helping retain the knowledge for a longer period. This provided the experimental evidence.

3.9 ANALYSIS OF DATA

The current study used Statistical Package for the Social Sciences (SPSS) to manage the collected data and process the data for statistical analysis. An independent samples t-test was used to see if there was significance difference between the mean score of the groups. Pre-test, post-test, and retention test scores of the samples were obtained and lists were prepared for both the control and experimental group. After preparing lists of pre-test, post-test, and retention test, mean, standard deviation, the difference of mean were computed on SPSS.

3.10 SUMMARY OF THE CHAPTER

First, this chapter determined research design. A true experimental design was selected in order to measure set objectives and test hypotheses. Students enrolled in the 10th class of all public sector boys' secondary schools in district Chakwal was taken as population. 93 students enrolled in the 10th class in Government Boys Secondary School, Malikwal, Tehsil Talagang, District Chakwal were taken as the sample in the pre-test stage. Forty (40) students scored low with respect to academic achievement. The experimental group and Control group were formed each of which consisted of 20 students. The intervention was provided to the 20 students (low achievers/marginal) of the experimental group. Informed consent was taken from each of the subject mentees. The teacher of Pak. Studies subject provided mentoring intervention to the subject mentee students according to continuous professional development mentoring framework areas taleemi calendar, lesson planning, activity-based teaching & learning, use of support material, student-teacher interaction, classroom management, students assessment, and homework. After the implementation of the intervention, a post-test

was administered to both experimental and control groups to assess the effect of mentoring. Pre-test, post-test, and retention test was administered to collect the data from the sampled population.

The groups were randomly assigned to one control and second experimental groups having 20 students (low achievers/marginal) each. The pre-test results were maintained for the purpose of data analysis. The experimental group was taught through a mentoring framework while the control group was taught through conventional teaching. Each group of subject mentee students was taught by observing conditions of similar time, learning environment, and course contents. However, the control group was not left in isolation. The researcher closely supervised and kept on vigorous eye on this group concurrently.

In first phase, mentor teacher was given mentoring training for one week according to the continuous professional development framework. The researcher trained the Pakistan Studies mentor teacher according to the CPD framework mentoring areas. In second phase experimental group students were taught by the mentor teacher according to the mentoring framework for four weeks. While the control group was taught by another teacher in the traditional way with no intervention. After four weeks' treatment to the experimental group post-test was conducted on both the control group and the experiment group. The amount of the time was maintained uniform for the pre-test and the post-test.

Relevant aspects of training to the experimental group were well planned and executed to the time scheduled of teaching, curriculum-based material and textual contents were articulated according to the instructional objectives of the course topics: such as the era of Zulfiqar Ali Bhutto (building the country afresh, reforms in social sectors, much-debated steps associated with the nationalization of industries, banks,

insurance companies, agricultural reforms). The most important achievement-related formation of the constitution in 1973, which serves the framework until now. All these content areas were step-wise planned and delivered through mentoring enrichment, the specific role of mentoring teacher-related activities were structured and student-centered activities designed and demonstrated in the various group-based shared participation in relation to the task and time. This was reflected in CPD during this four-week mentoring intervention. All these trends and issues, through the behavioral changes in the attitudes of teachers substantially built up new blood in the knowledge of teachers, there enhanced vision and reflective thinking about the realities of time, place, and circumstances of the nation. This is how the CPD framework paved the way for thoughts.

CHAPTER 4

DATA ANALYSIS

This chapter deals with the analysis and interpretation of the data. The results were derived from the collected data. The data collected through pre-test, post-test, and retention test from the respondents by the administration of t-test to check the effect of mentoring on the academic achievement of the students. The researcher used the Statistical Program for Social Studies (SPSS) computer software. The data were analyzed through computer and hypotheses were tested through mean and independent sample t-test. The results were then interpreted.

Moreover, a t-test was used to measure means between the control group and the experimental group.

Table 4.1: Group Statistics of Academic Achievement

Obj. 1: To find out the effect of mentoring on the academic achievement of the students at the secondary school level.

Group	N	Mean	SD
Control	20	17.25	4.962
Experimental	20	23.65	4.487

The mean score of the the control group was 17.25 which showed the average marks taken by the students of the control group. On the contrary, the mean score of the experimental group was 23.65 which showed the average marks taken by the students of the experimental group who were provided mentoring. There was a mean difference between the academic achievement of the students of the control group (17.25) and the experimental group (23.65). This showed that students forming an

experimental group who were provided mentoring attained greater academic achievement i.e. 23.65-17.25= 6.4. Therefore, it was concluded that the students who were provided mentoring intervention attained an average of 6.4 higher scores than the students who were not provided mentoring intervention.

Table 4.2: Independent Samples Test of Academic Achievement

H_1: There is no significant effect of mentoring on the academic achievement of the students at the secondary school level.

	F	Sig.	t	df	Sig. (2 tailed)	MD	SED
				Levene's Test of Equality of Variances			
Control Group	1.179	.284	-4.278	38	.000	-6.400	1.496
Experimental group			-4.278	37.622	.000	-6.400	1.496

The results of Levene's test for equality of variances showed an insignificant p-value (.284) which was more than the .05 value of significance. This means that the homogeneity of variances was not proved and the difference in variances of academic achievement was found between the control group and the experimental group. Therefore, it was concluded that there was a statistically significant difference between the control group and the experimental group. The results of the t-test for equality of means showed a significant p-value (sig. 2-tailed = .000) which was lesser than the .05 value of significance. This means that there was a significant difference in the mean values of academic achievement between the control group and the experimental group. It was thus concluded that a statistically significant difference existed between the mean values of the control group and the experimental group regarding their academic achievement.

Thus the null hypothesis 1, there was no significant effect of mentoring on the academic achievement of the students at the secondary school level was rejected. This means that the alternative positive hypothesis was maintained.

Table 4.3: Control Group Statistics of Academic Achievement of Pre-test & Post-test

H_2: There is no significant difference between pre-test and post-test scores of the control group on the academic achievement of the students at the secondary school level.

Group	N	Mean	SD
Pre-test	20	16.95	5.155
Post-test	20	17.25	4.962

The mean score of the pre-test was 16.95 which showed the academic achievement of the students of the control group. On the contrary, the mean score of the control group at the post-test stage was 17.25 which showed their academic achievement at two different stages. There was a mean difference between the academic achievement of the students of the control group at the pre-test stage (16.95) and the control group at the post-test stage (17.25). This showed that students forming control group earned greater academic scores at the post-test stage i.e. 17.25-16.95 = 0.30. However, this was a minor difference. Therefore, it was concluded that the students of the control group attained almost similar scores at the post-test stage when compared to their pre-test stage scores.

Table 4.4: Independent Samples Test of Academic Achievement of Control

Group

	F	Sig.	t	df	Sig. (2 tailed)	MD	SED
					Levene's Test of Equality of Variances		
Pre-test	.021	.885	-.188	38	.852	-.300	1.600
Post-test			-.188	37.945	.852	-.300	1.600

The results of Levene's test for equality of variances showed an insignificant p-value (.885) which was more than the .05 value of significance. This means that the homogeneity of variances was not proved and the difference in variances of academic achievement was found between the pre-test stage and post-test stage of the control group. Therefore, it was concluded that there was a statistically significant difference between the pre-test stage and post-test stage of the control group. The results of the t-test for equality of means showed an insignificant p-value (sig. 2-tailed = .852) which was more than the .05 value of significance. This means that there was no significant difference in the mean values of academic achievement between the pre-test stage and post-test stage of the control group. Therefore, it was concluded that no statistically significant difference existed between mean values of the pre-test stage and post-test stage regarding their academic achievement. Thus the null hypothesis 2, there is no significant difference between pre-test and post-test scores of the control group on the academic achievement of the students at secondary school level was rejected. This means that the alternative positive hypothesis was accepted.

Table 4.5: Group Statistics of Academic Achievement of Experimental Group

of Pre-test & Post-test

H_3: There is no significant difference between pre-test and post-test scores of the experimental group on the academic achievement of the students at the secondary school level.

Group	N	Mean	SD
Pre-test	20	18.15	3.746
Post-test	20	23.65	4.487

The mean score of the pre-test was 18.15 which showed the academic achievement of the students of the experimental group. On the contrary, the mean score of the experimental group at the post-test stage was 23.65 which showed their academic achievement after providing them mentoring. There was a mean difference between the academic achievement of the students of the experimental group at the pre-test stage (18.15) and the experimental group at the post-test stage (23.65). This showed that students forming an experimental group who were provided mentoring gained greater academic achievement i.e. 23.65-18.15 = 5.5. Therefore, it was concluded that the students who were provided mentoring attained an average of 5.5 more scores participating at the post-test stage than the scores achieved at the pre-test stage when they were not provided mentoring.

Table 4.6: Independent Samples Test of Experimental Group; Pre-test & Post-test

	F	Sig.	t	df	Sig. (2 tailed)	MD	SED
				Levene's Test of Equality of Variances			
Pre-test	.858	.360	-4.208	38	.000	-5.500	1.307
Post-test			-4.208	36.824	.000	-5.500	1.307

The results of Levene's test for equality of variances showed an insignificant p-value (.360) which was more than the .05 value of significance. This means that the homogeneity of variances was not proved and the difference in variances of academic achievement was found between the pre-test stage and post-test stage of the experimental group. Therefore, it was concluded that there was a statistically significant difference between the pre-test stage and post-test stage of the experimental group. The results of the t-test for equality of means showed a significant p-value (sig. 2-tailed = .000) which was lesser than the .05 value of significance. This means that there was a significant difference in the mean values of academic achievement between the pre-test stage and post-test stage of the experimental group. Therefore, it was concluded that a statistically significant difference existed between mean values of the pre-test stage and post-test stage in their academic achievement. Thus the null hypothesis 3, there is no significant difference between pre-test and post-test scores of the experimental group on the academic achievement of the students at secondary school level was rejected. This yields that the alternative positive hypothesis was accepted.

Table 4.7: Group Statistics of Retention

Obj. 2: To assess the effect of mentoring on the degree of retention of the students at the secondary school level.

Group	N	Mean	SD
Control	20	17.25	4.962
Experimental	20	25.45	4.979

The mean score of the control group was 17.25 which showed the average level of retention of marks taken by the subject mentee students included in the control group. On the contrary, the mean score of the experimental group was 25.45 which showed the average marks retained by the students of the experimental group who were provided mentoring. There was a mean difference between the retention of the students of the control group (17.25) and the experimental group (25.45). This showed that students who participated in the experimental group and who were provided mentoring held a greater rate of retention as reflected in their marks i.e. 25.45-17.25 = 8.20. Therefore, it was concluded that the students who were provided mentoring had retained average marks of 8.2 more scores than the students who were not provided mentoring.

Table 4.8: Independent Samples Test of Retention

H4: There is no significant difference in retention of post-test scores of the students at the secondary school level.

	F	Sig.	t	df	Sig. (2 tailed)	MD	SED
				Levene's Test of Equality of Variances			
Control Group	.070	.792	-5.217	38	.000	-8.200	1.572
Experimental Group			-5.217	38.000	.000	-8.200	1.572

The results of Levene's test for equality of variances showed an insignificant p-value (.792) which was more than the .05 value of significance. This means that the homogeneity of variances was not proved and the difference in variances of retention was found between the control group and the experimental group. Therefore, it was concluded that there was a statistically significant difference between the control group and the experimental group regarding their retention. The results of the t-test for equality of means showed a significant p-value (sig. 2-tailed = .000) which was lesser than the .05 value of significance. This means that there was a significant difference in the mean values of retention between the control group and the experimental group. Therefore, it was concluded that a statistically significant difference existed between the mean values of the control group and the experimental group regarding their retention of academic scores.

The null hypothesis four, there is no significant difference in retention of post-test scores of the students at the secondary school level was not supported. This means that an alternative positive hypothesis was maintained.

4.9 SUMMARY OF CHAPTER

This chapter characterized the analysis of the pre-test, post-test, and retention test data collected from the control and experimental groups. To measure the mean scores of the pre-test and post-test scores t-test was used. Analysis of the data illustrated the significant effect of mentoring on the academic achievement of the students. The results of data analysis also showed that there was a statistically significant effect of the mentoring intervention on the degree of retention of the mentee students. The mean score of the control group was 17.25 which showed the average marks taken by the students of the control group. On the contrary, the mean score of the experimental group was 23.65 which showed the average marks taken by the students of the experimental group who were provided mentoring. There was a mean difference between the academic achievement of the students of the control group (17.25) and the experimental group (23.65). This showed that students participating in the experimental group who were provided mentoring gained greater academic achievement i.e. 23.65-17.25= 6.4. Therefore, it was concluded that the students who were provided mentoring attained an average of 6.4 more scores than the students who were not provided mentoring. The results of Levene's test for equality of variances showed an insignificant p-value (.284) which was more than the .05 value of significance. This means that the homogeneity of variances was not proved and the difference in variances of academic achievement was found between the control group and experimental group.

CHAPTER 5

FINDINGS, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

This chapter comprises three major sections: findings, conclusions, and recommendations. All three are based upon the results obtained from data analysis. The first part discusses major findings where the researcher found a positive and significant effect of the mentoring intervention on academic achievement and degree of retention. In the second part, the researcher concludes that the provision of proper mentoring through CPD framework intervention to marginal learners significantly enhances their academic achievement and retention. Hence, this intervention would also work for other students by generalizing the results of the current study. In the third part, the results are discussed in light of other relevant studies.

5.1 FINDINGS

The major purpose of this study was to find out the effect of mentoring on academic achievement and retention of the mentee students at the secondary school level. The intervention of mentoring included continuous professional development (CPD) mentoring framework which includes the following areas; Taleemi calendar, lesson planning, activity-based teaching & learning, use of support material, student-teacher interaction, classroom management, student assessment, and homework.

Analysis of the data yielded the following findings:

     i.   Through comparison, it was found that the level of academic achievement score of the control group was 17.25 and the mean score of the experimental group was 23.65. This showed the average marks taken by the students of the experimental group who were provided mentoring.

It was found that students participating in the experimental group who were provided mentoring gained greater academic attainment i.e. 23.65-17.25= 6.4 (Table No. 4.1).

ii.   The results of Levene's test also showed that there was a statistically significant difference between the control group and the experimental group on academic achievement. This revealed a statistically significant difference between the control group and the experimental group. The results of the t-test for equality of means showed a significant p-value (.000) was lesser than the .05 value of significance. This showed a significant difference in the mean values of academic achievement between the control group and the experimental group on their academic achievement (Table No. 4.2).

iii.   The mean score of the control group on the pre-test was 16.95. Relatively, the mean score of the control group at the post-test stage was 17.25. There was a mean difference between the academic achievement of the students of the control group at the pre-test stage (16.95) and the control group at the post-test stage (17.25). This showed that students belonging to the control group earned higher academic achievement at the post-test stage i.e. 17.25-16.95 = 0.30. This was regarded as a marginal difference. It was noted that the control group attained almost similar scores at the post-test stage when compared to their pre-test stage scores (Table No. 4.3 and 4.4).

iv.   The mean score of the experimental group in pre-test was 18.15. On the contrary, the mean score of the experimental group at the post-test stage was 23.65. This showed the academic achievement of the students of the

experimental group provided mentoring intervention. There was a mean difference between the academic achievement of the students of the experimental group at the pre-test stage (18.15) and the experimental group at the post-test stage (23.65). This showed that students forming the experimental group having provided mentoring intervention relatively earned greater academic achievement i.e. 23.65-18.15 = 5.5. It was thus concluded that the students have received the mentoring intervention had attained an average of 5.5 more scores at the post-test stage than the scores achieved at the pre-test stage when they were not yet provided mentoring (Table No.4.5 and 4.6).

v.   On the retention variable, the mean score of the control group was 17.25. This showed the average level of retention of marks taken by the students included in the control group. In comparison with the experimental group, the mean score of the experimental group was 25.45. This showed the average marks retained by the students of the experimental group who were provided mentoring. There was a mean difference of 8.20 marks. Therefore, it was concluded that the students who were provided mentoring retained average marks of 8.2 higher scores than the students who were not provided mentoring (Table No. 4.7).

vi.   The results of Levene's test a difference in retention between the control group and the experimental group. Moreover, the results of the t-test showed a significant p-value (sig. 2-tailed = .000) which showed a significant difference in the mean values of retention between control and experimental groups. Therefore, a statistically significant difference

was found between the mean values of the control group and experimental group regarding their retention of academic scores (Table No. 4.8).

5.2 CONCLUSIONS

Based on the statistical analysis of data and findings of the study, the following conclusions were drawn.

i. The statistics revealed that the overall level of academic achievement of the experimental group was higher than the level of academic achievement of the control group. Therefore, it was concluded that the students who were provided mentoring intervention attained higher scores than the students who were not provided mentoring intervention.

ii. The statistics shown that the overall level of retention of marks achievement of the experimental group was higher than the level of academic achievement of the control group. Therefore, it was concluded that the students who were provided mentoring retained more scores than the students who were not provided mentoring.

iii. The inferential statistics presented that academic achievement and retention from the pre-test stage to the post-test stage of the mentee students improved their overall academic achievement and retention. Therefore, it was concluded that there was a statistically significant difference between the control group and the experimental group.

iv. The students of the control group attained almost similar scores at the post-test stage when compared to their pre-test stage scores. Therefore, it was

concluded that there was a statistically significant difference between the pre-test stage and post-test stage scores of the control group.

v. The students of the experimental group attained more scores at the post-test stage than the scores achieved at the pre-test stage scores. Therefore, it was concluded that there was a statistically significant difference between the pre-test stage and post-test stage scores of the experimental group.

5.3 DISCUSSION

This research has substantially contributed towards filling the research gap available in the existing academic literature about academic achievement, retention, and mentoring. Previous studies have found a significant positive effect of mentoring on the academic achievement of the mentee students by using qualitative research methods where they used cross-sectional data. Various studies emphasized using intervention-based mentoring as an independent variable to enhance the academic achievement of the students rather than just believing in the connotation of the significant positive effect of mentoring on academic achievement. Hence, the researcher has taken this grey area as an avenue to move the discussion forward in theory and operational research. In this context, the controversies in the findings of previous studies that were conducted to tap the magnitude of the "mentoring effect" on mentee students' achievement (Ingersoll & Strong, 2011) who conducted an impact study on beginning teachers. The initiative provided important inducements to move the academic exploration forward from this point. However, according to Ingersoll and Strong (2011), research gaps were available about deciding an appropriate time period (length) required for an effective mentoring program/intervention by specifically taking poor-performers as the target populations (Ingersoll & Strong, 2011). This is very collaborative to this work, independent of target groups.

This study has led the conversation way forward and put a launching pad for further exploration in this area by addressing this research problem. As this study used a tailored mentee-mentor partnership program to improve academic achievement and retention of the mentee students, it has contributed towards solution of a big problem faced by the current study in terms of developing a tailored mentee-mentor partnership for reaping effective outcomes of mentoring program as required by Estrada et al. (2018) through there longitudinal work. They recommended scholars to use quality mentorship programs accompanied by the research experience to enhance learning. Another contribution includes the use of specialist mentoring experts (teachers) in natural mentoring relationships (teacher-student relationship) as desired by Lucas and James (2018) while evaluating specialist mentoring for university students with autism, distress, and mental conditions. This rare area of investigation. This study equally covered low achievers, risk cases belonging to marginal groups in a typical area of Pakistan. As this study has used supportive exchanges between mentor teacher and mentee students, it has addressed the recommendation of Hurd et al. (2018) who advocated the use of appraisal support of mentors in combating the psychological distress of students.

There was a significant effect of mentoring on academic achievement. This collaborates with the findings of Turner (2018) who found a significant positive effect on the academic achievement of the students, findings of Linn et al. (2011) who found a significant effect of mentoring on the academic achievement of the mentee students. Moreover, as the length of mentoring intervention is critical (Ingersoll & Strong, 2011), the researcher has taken special care in this regard and used a tailored mentee-mentor partnership to reap effective outcomes of mentoring program as desired by Estrada et al. (2018) and Lucas and James (2018) with a special focus on natural mentoring

relationships by having supportive exchanges between mentee students and mentor teachers as suggested by Hurd et al. (2018). Resultantly, the researcher was able to achieve the academic achievement of mentee students.

As the current study targeted a population of students enrolled in the 10th class of public sector secondary schools, it is considered important to correlate the findings with the findings of previous studies conducted on students of different levels of education. Finding of current study authenticated findings of previous studies (Chizhik et al., 2018) who examined student teachers self-efficiency through shared mentoring in learning environments and Larose et al., (2018) examined how mentoring by teachers improve the adjustment of academically at-risk students in high schools. The finding of the current study corresponds with the findings of studies concerning students at the adolescent level which found a positive significant effect of mentoring on student learning and consequent academic achievement (Chan, et al., 2018; Larose, et al., 2018; Rhodes et al., 2000) all this work related to child development and mentoring relationship influencing adolescent's academic adjustment. A special focus was put on discussing the findings with the findings of studies that took students of secondary level as the target population in their studies. Previously, Grossman et al. (2012) took the sample of grade 4 to grade 9 in schools and belonged to diverse ethnic and racial backgrounds. They found that the students who completed the mentoring program exhibited significant improvement in academic achievement relative to students who were dropped from the program in the initial stages. Gutman & Midgley (2000) found that students who were elevated to middle school by passing out elementary level experienced a significant decline in their academic performance as they were lacking proper mentoring from parents and teachers. Hence, they proposed to use parent and

teacher mentoring as a mandatory approach for the students of middle and secondary level education.

Findings of the current study help management to improve educational processes in secondary schools through mentoring. This improvement was evidenced in the United States and Europe. The current study serves Pakistani students who have no proper mentoring support to cope up with the academic problems they encounter. This study also provides guidance to the teachers for developing practical mentoring literacy and to assist them in integrating mentoring practices into their teaching for enhancing academic achievement. This would lead to a higher retention rate of students learning at secondary levels. The researcher believes that if the mentoring framework is implemented on a broader basis in Pakistan, it would increase students' academic achievement and performance effectively.

5.4 RECOMMENDATIONS

The current study has added ample knowledge to the existing literature in the field of mentoring, academic achievement, and retention of the mentee students. This study provides guidelines for researchers and practitioners to improve academic achievement and enhance the retention rate of low performing learners by providing them mentoring intervention. Practitioners may understand the findings of this study to implement the effective and need-based mentoring practices.

In accordance with the findings and conclusions of the study, the following recommendations were formulated:

i. Mentoring has a significant effect on the academic achievement of the students at the secondary school level so mentoring intervention needs to be used at the secondary level.

73

ii. Mentoring has a significant effect on the retention of the students at the secondary school level so planned mentoring intervention and its step-wise execution may be highly beneficial in concept-building, problem-solving, leading to vision and creativity.

iii. Continuous Professional Development (CPD) mentoring framework may be used in a variety of subjects, particularly in allied courses: maths, science, technology, etc. at the secondary school level.

iv. The findings of the study may be disseminated among relevant stake holders: policymakers, curriculum planners, teacher educators and administrators to help them get awareness about the effect of mentoring on the academic achievement of the students at the secondary school level.

v. The Quaid-e-Azam Academy for Educational Development (QAED) Punjab, Lahore may integrate the contents of mentoring in the professional development programs of teacher training for developing practical mentoring literacy.

vi. The Quaid-e-Azam Academy for Educational Development (QAED) Punjab, Lahore may utilize the findings of research to launch CPD mentoring framework at secondary level for accelerating learning processes for all types of learners.

5.5 RECOMMENDATIONS FOR FURTHER RESEARCH

i. This study was conducted on male students in a single school, as a unit of study. Similar studies may be planned and carried out to compare the effect of mentoring on the academic achievement of female and mixed populations.

ii.   Studies may be conducted with students from different cultural backgrounds and a variety of sites on a large scale, gradually building up the longitudinal chain of studies.

iii.   Further studies may be conducted to investigate the effect of mentoring on different subjects at secondary school and other levels of education.

iv.   Experiences of the current covid incidence suggest exploring online mentoring interventions for building up an alternative delivery system of formal programs through non-formal modes.

5.6 GENERALISABILITY

This was a true experimental study and was not expected to provide evidence for generalisability. However, there are some elements of the study suggesting its generalizability, both within the study and outside. Within the institutional context, this study was conducted at the secondary school level. It holds a special worth for the management of secondary schools, a general worth for all other contexts and cultures. The findings of this study can be generalized, other schools can also gain benefits from it. It is a potential study of mentoring services in Pakistan at the secondary school level. The management of schools can use this study particularly for mentoring the students of the secondary level so that their performance may be enhanced.

The students' community possesses common characteristics, homogenous abilities, and socio-economic trends. The school curriculum programs, textual material, delivery system are uniform in the district, and elsewhere, as they are governed by Punjab Education Department and their associated bodies: Punjab curriculum wing, Punjab textbook board, and DSD (QAED Punjab). This umbrella system can be

coordinated and integrated to connect the student population to seek the benefit of this

and similar innovative investigations.

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Pre & Post Test

Name: _____ Roll No: _____ Sec: _____

Subject: Pakistan Studies   **Class: 10th**   **Time: 1 Hour**

(Objective)

Q. 1. Four Possible answers A, B, C, and D are given for each question. Choose the correct answer.   50 x 1= 50

1. In which election it was declared mandatory for a candidate to be graduate?

   A. 1997   B. 2002   C. 2008   D. 2013

2. On 20th Dec 1971 took the oath of president of Pakistan and Chief Martial law administrator?

   A. Muhammad Khan Junejo   B. Z.A Bhutto   C. Nawaz Sharif   D. Benazir Bhutto

3. Youm-e-Takbeer is celebrated on?

   A. 23rd March B. 15th June   C. 1st May   D.28th May

4. Zakat is deducted from the Muslim account holders at the percentage of?

   A. 2.5%   B. 3%   C. 3.5%   D. 4%

5. The total members of national assembly are?

   A. 322   B. 342   C. 382   D.442

6. Pakistan did atomic blast in?

   A. 1993   B. 1995   C. 1998   D. 2001

7. In 1993 government of Benazir Bhutto started five year plan?

   A. 5th   B. 6th   C. 7th   D. 8th

8. 1973 constitution was consist of how many articles?

A. 260   B. 270   C. 280   D. 290

9. The diplomatic relations established between Pakistan and Afghanistan in?

A. 1947   B. 1948   C. 1949   D. 1950

10. Which country sent its forces into Afghanistan in 1979?

A. American   B. Britian   C. Russia   D. France

11. The People's Republic of China was formed in?

A. 1947   B. 1949   C. 1951   D. 1953

12. The number of members of United Nations economic and social control is?

A. 34   B. 44   C. 54   D. 64

13. The first meeting of the organization of the Islamic conference was held in 1969 in city?

A. Rabat   B. Jeddah   C. Karachi   D. Tehran

14. The Shimla pact was held between Pakistan and India in?

A. 1971   B. 1972   C. 1967   D. 1965

15. The third SAARC conference was held in?

A. Karachi   B. Kathmandu   C. Delhi   D. Dhaka

16. Economic development means?

A. Increase in national income   C. increase in Agricultural income

B. Increase in employment   D. Increase in production and service

17. Pakistan's economy is?

A. Developed   B. under developed   C. extremely developed   D. poor

18. 5 year development plan in Pakistan started in?

A. 1950   B. 1955   C. 1958   D. 1960

19. The largest sector of Pakistan economy is?

A. Trade   B. Industry   C. Agriculture   D. Service

20. The largest scheme for producing hydroelectric power in Pakistan is?

    A. Ghazi Barotha B. Mangla Dam C. Tarbela Dam D. Warsak Dam

21. Pakistan imports fertilizers from Tunisia, Italy, America and?

    A. Iran   B. Afghanistan   C. India   D. Iraq

22. Plant diseases lessen the crop productivity?

    A. 15%   B. 20%   C. 25%   D. 30%

23. Dry Port in Rawalpindi was built in?

    A. 1973 A.D B. 1974 A.D C. 1988 A.D D. 1990 A.D

24. Pakistan Imports edible oil from America, Malaysia and?

    A. Saudi Arabia   B. Iran   C. Sri Lanka D. Hong Kong

25. The world's highest mountain Peak, Mount Everest is located in?

    A. Sri Lanka B. Nepal   C. Pakistan   D. Bhutan

26. Zulfiqar Ali Bhutto was the civilian Chief Law Administrator of the country?

    A. 1st   B. 2nd   C. 3rd   D. 4th

27. On 16th January 1972 how many industrial units were nationalized?

    A. 10   B. 11   C. 12   D. 15

28. In the era of Bhutto land were distributed until march 1976?

    A. 1 million B. 1.5 million   C. 2 million   D. 2.5 million

29. According to the constitution of 1973, the National Assembly will have tenure of?

    A. 3 Years   B. 4 Years   C. 5 years   D. 10 years

30. Second General elections were held in?

    A. 1976   B. 1977   C. 1985   D. 1990

31. Army Chief Zia ul Haq overthrew the Bhutto government on?

   A. 1976   B. 1977   C. 1979   D. 1980

32. General Zia ul Haq was killed in an Air crash on?

   A. 17th Aug 1986   B. 17th Aug 1988   C. 17th Aug 1990

   D. 17th Aug 1992

33. The government passed sharia ordinance in?

   A. 1978   B. 1979   C. 1983   D. 1988

34. General Zia ul Haq ruled on the country?

   A. 9 years   B. 10 years   C. 11 years   D. 12 years

35. The international Islamic university in Islamabad was started in?

   A. 1981   B. 1982   C. 1983   D. 1984

36. In 1979 Russia attacked on?

   A. Pakistan   B. Afghanistan   C. Iran   D. China

37. During Russian attack how many Afghan refugees were migrated to Pakistan?

   A. 25 lakh   B. 30 lakh   C. 35 lakh   D. 40 lakh

38. Islamic world's first woman Prime minister was?

   A. Fatimah Jinnah B. Shah Nawaz C. Shazia Iqbal D. Benazir Bhutto

39. Which party gain power in election of 1988?

   A. PPP   B. PML N   C. PML   D. JUI

40. Pakistan rejoined common wealth in?

   A. 1985   B. 1987   C. 1988   D. 1989

41. Total population of Pakistan in 1998?

   A. 8 Crore   B. 10 Crore   C. 12 Crore   D. 13 Crore

42. Pakistan is situated in the south of the continent of?

A. Europe   B. Asia   C. Africa   D. Australia

43. Total length of the Silk route is?

    A. 700 Km   B. 900 Km   C. 1000 Km   D. 1200 Km

44. The European Union is an organization of?

    A. 25 courtiers B. 27 countries C. 29 countries D. 30 countries

45. UNO came into being on?

    A. 1943   B. 1944   C. 1945   D. 1946

46. UNO has how many basic organizations?

    A. Four   B. Five   C. six   D. seven

47. Muhammad Ayyub Khan came into Power in?

    A. 1955   B. 1958   C. 1965   D. 1971

48. Into how many groups minerals are divided?

    A. 2 B. 3   C. 4   D. 5

49. How many cropping seasons are there in Pakistan:

    A. 1 B. 2   C. 3   D. 4

50. Jinnah Barrage has been constructed at?

    A. Indus   B. Ravi   C. Sutlej   D. Chenab

Lesson Plan No. 1

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	CHAPTER 1: HISTORY OF PAKISTAN- II Sub Topic: Zulfiqar Ali Bhutto Era
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Explain the major aspects of different reforms, achievements. 2. Explain the contributions in terms of industrial & agricultural. 3. Explain Zulfiqar Ali Bhutto Era.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: Whole Class Activity (10 minutes)	Teacher will: 1. Ask questions about history of Pakistan. 2. Ask about favourite leader. 3. Ask about 1965 war. 4. Check Homework.

Development: **Activity-1** **(Individual)** **(20 minutes)**	1. Teacher will ask students to open the text book and every student will read the text carefully. 2. Every student will underline the difficult words/terms in the textbook. 3. Teacher will write these difficult words on the board. 4. Teacher will give a brief lesson about Zulfiqar Ali Bhutto era reforms, achievements and contributions.
Activity-2 **(Group Work)** **(10 minutes)**	1. Teacher will make four groups (A, B, C, D). 2. Chart and marker will be given to the students to write down main points regarding reforms, achievements and contribution of Z.A. Bhutto era. 3. One volunteer from each group will share these main points with the whole class.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students: Group-A: Tell two agriculture reforms. Group-B: Tell two labour reforms. Group-C: Tell two impacts of nationalization on industry. Group-D: Tell two impacts of nationalization on education.
Home Work **(2 minutes)**	Write and learn four main points under following headings: i. Agriculture & Labour reforms, ii. Impact of Nationalization on Industry and Education.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 2

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	**CHAPTER 1: HISTORY OF PAKISTAN- II** **Sub Topic:** Zia Era
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Explain the major aspects of different reforms. 2. Explain educational, social & agricultural contributions. 3. Explain features of Zia Era.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: Whole Class Activity (10 minutes)	Teacher will: 1. Ask questions about history of Pakistan. 2. Ask about favourite leader. 3. Ask about 1965 war. 4. Check Homework.

Development: Activity-1 (Individual) (20 minutes)	1. Teacher will ask students to open the text book and every student will read the text carefully.
	2. Every student will underline the difficult words/terms in the textbook.
	3. Teacher will write these difficult words on the board.
	4. Teacher will give a brief lesson about Zia Era reforms, achievements and contributions.
Activity-2 (Group Work) (10 minutes)	1. Teacher will make four groups (A, B, C, D).
	2. Chart and marker will be given to the students to write down main points regarding reforms, achievements and contribution of Zia Era.
	3. One volunteer from each group will share these main points with the whole class.
Students Assessment (3 minutes)	Teacher will ask questions from each group and also give feedback to the students:
	Group-A: Tell two agriculture reforms.
	Group-B: Tell two labor reforms.
	Group-C: Tell two social reforms.
	Group-D: Tell two education reforms.
Home Work (2 minutes)	Write and learn four main points under following headings:
	i. Agriculture, social and & educational reforms.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 3

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	**CHAPTER 1:** HISTORY OF PAKISTAN- II **Sub Topic:** Benazir Bhutto Eras (I & II)
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Explain the major aspects of different achievements of Benazir Bhutto Eras (I & II). 2. Explain the contributions in terms of social, agricultural and educational. 3. Explain Benazir Bhutto Eras (I & II).
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: **Whole Class Activity** **(10 minutes)**	Teacher will: 1. Ask questions about history of Pakistan. 2. Ask about favourite leader. 3. Ask about 1971 war.

	4. Check Homework.
Development: **Activity-1** **(Individual)** **(20 minutes)**	1. Teacher will ask students to open the text book and every student will read the text carefully. 2. Every student will underline the difficult words/terms in the textbook. 3. Teacher will write these difficult words on the board. 4. Teacher will give a brief lesson about Benazir Bhutto Eras (I & II) reforms, achievements and contributions.
Activity-2 **(Group Work)** **(10 minutes)**	1. Teacher will make four groups (A, B, C, D). 2. Chart and marker will be given to the students to write down main points regarding reforms, achievements and contribution of Benazir Bhutto Eras (I & II). 3. One volunteer from each group will share these main points with the whole class.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students: Group-A: Tell two agriculture reforms. Group-B: Tell two social reforms. Group-C: Tell two educational reforms. Group-D: Tell two impacts of Benazir Bhutto Eras (I & II).
Home Work **(2 minutes)**	Write and learn ten main features of Benazir Bhutto Eras (I & II)

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 4

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	CHAPTER 1: HISTORY OF PAKISTAN- II Sub Topic: Nawaz Sharif Era (I & II)
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Explain the major aspects of Nawaz Sharif Era (I & II) reforms & achievements. 2. Explain the contributions in terms of agricultural, social, educational and nuclear. 3. Explain Nawaz Sharif Era (I & II).
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: Whole Class Activity (10 minutes)	Teacher will: 1. Ask questions about history of Pakistan. 2. Ask about favourite leader. 3. Ask about atom bomb war. 4. Check Homework.

Development: **Activity-1** **(Individual)** **(20 minutes)**	1. Teacher will ask students to open the text book and every student will read the text carefully. 2. Every student will underline the difficult words/terms in the textbook. 3. Teacher will write these difficult words on the board. 4. Teacher will give a brief lesson about Nawaz Sharif Era (I & II) reforms, achievements and contributions.
Activity-2 **(Group Work)** **(10 minutes)**	1. Teacher will make four groups (A, B, C, D). 2. Chart and marker will be given to the students to write down main points regarding reforms, achievements and contribution of Nawaz Sharif Era (I & II). 3. One volunteer from each group will share these main points with the whole class.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students: Group-A: Tell two agriculture reforms. Group-B: Tell two social reforms. Group-C: Tell two educational reforms. Group-D: Tell impact of nuclear power on Pakistan.
Home Work **(2 minutes)**	Write and learn ten main impact of nuclear power on Pakistan social and economic sector.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 5

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	**CHAPTER 2:** Pakistan in World Affairs **Sub Topic:** Objectives of Pakistan Foreign Policy
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Define objectives of Pakistan foreign policy.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card

Introduction:
 	
Whole Class Activity
 	
(10 minutes)
	Teacher will:
	
	   1. Ask questions about Pakistan role in the world.
	
	   2. Ask about favourite country.
	
	   3. Ask about relationship.
	
	   4. Check Homework.

Development: Activity-1 (Individual)	1. Teacher will ask students to open the text book and every student will read the text carefully.

(20 minutes)	2. Every student will underline the difficult words/terms in the textbook.
	3. Teacher will write these difficult words on the board.
	4. Teacher will give a brief lesson about Objectives of Pakistan Foreign Policy.
Activity-2	1. Teacher will make four groups (A, B, C, D).
(Group Work)	2. Chart and marker will be given to the students to write down main points regarding Pakistan Foreign Policy.
(10 minutes)	3. One volunteer from each group will share these main points with the whole class.
Students Assessment	Teacher will ask questions from each group and also give feedback to the students:
(3 minutes)	Group-A: Tell two foreign policy objectives.
	Group-B: Tell two foreign policy objectives.
	Group-C: Tell two foreign policy objectives.
	Group-D: Tell two foreign policy objectives.
Home Work	Write and learn eight main points of Pakistan Foreign Policy
(2 minutes)	Objectives.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 6

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	**CHAPTER 2:** Pakistan in World Affairs **Sub Topic:** Pakistan Relations with Neighbouring Countries
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Narrate Pakistan relations with neighbouring countries.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: Whole Class Activity (10 minutes)	Teacher will: 1. Ask questions about Pakistan neighbouring countries. 2. Ask about Pakistan relationship with India. 3. Ask about Pakistan relationship with China. 4. Check Homework.
Development: Activity-1 (Individual)	1. Teacher will ask students to open the text book and every student will read the text carefully.

(20 minutes)	2. Every student will underline the difficult words/terms in the textbook.
	3. Teacher will write these difficult words on the board.
	4. Teacher will give a brief lesson about Pakistan relationships with neighboring countries.
Activity-2 **(Group Work)** **(10 minutes)**	1. Teacher will make four groups (A, B, C, D).
	2. Chart and marker will be given to the students to write down name of Pakistan neighboring countries and their capitals name.
	3. One volunteer from each group will share these main country and capital name.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students:
	Group-A: Tell one country and its capital name.
	Group-B: Tell one country and its capital name.
	Group-C: Tell one country and its capital name.
	Group-D: Tell one country and its capital name.
Home Work **(2 minutes)**	Write and learn Pakistan neighboring countries and their capital's name and also five sentence about relationship with Pakistan.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 7

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	**CHAPTER 2:** Pakistan in World Affairs **Sub Topic:** Pakistan and the Muslim World
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Explain Pakistan relations with the Muslim countries.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card

Introduction:
 	
Whole Class
 	
Activity
 	
(10 minutes)
	Teacher will:
	
	    1. Ask questions about Pakistan neighbouring countries.
	
	    2. Ask about Muslim countries name.
	
	    3. Ask about Pakistan relationship with Iran.
	
	    4. Check Homework.

Development: Activity-1 (Individual)	1. Teacher will ask students to open the text book and every student will read the text carefully.

(20 minutes)	2. Every student will underline the difficult words/terms in the textbook.
	3. Teacher will write these difficult words on the board.
	4. Teacher will give a brief lesson about Pakistan relationships with the Muslim countries.
Activity-2 **(Group Work)** **(10 minutes)**	1. Teacher will make four groups (A, B, C, D).
	2. Chart and marker will be given to the students to write down name and capitals of the Muslim countries.
	3. One volunteer from each group will share these name and capitals of the Muslim countries.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students:
	Group-A: Tell name of four Muslim countries and their capitals.
	Group-B: Tell name of four Muslim countries and their capitals.
	Group-C: Tell name of four Muslim countries and their capitals.
	Group-D: Tell name of four Muslim countries and their capitals.
Home Work **(2 minutes)**	Write and learn Muslim countries name and their capitals. One paragraph about Pakistan relationship with Iran and Syria.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

Lesson Plan No. 8

Teacher	Mohsin Hanif
School	Government High School Malikwal, Chakwal
Subject	Pakistan Studies
Grade Level	10th
Lesson Title	CHAPTER 2: Pakistan in World Affairs Sub Topic: Pakistan's Relations with the Major World Powers
Total Duration	(45 minutes duration)

Student Learning Outcomes	Students will be able to: 1. Highlight Pakistan relations with major world countries. 2. Describe Pakistan relations with USA and China.
Materials/ Resources Required	Lesson Plan, Text Book, Writing Board, Markers, Charts, Flash card
Introduction: Whole Class Activity (10 minutes)	Teacher will: 1. Ask questions about Pakistan neighbouring countries. 2. Ask about Pakistan relationship with Muslim countries. 3. Ask about Pakistan relationship with China. 4. Check Homework.

Development: **Activity-1** **(Individual)** **(20 minutes)**	1. Teacher will ask students to open the text book and every student will read the text carefully. 2. Every student will underline the difficult words/terms in the textbook. 3. Teacher will write these difficult words on the board. 4. Teacher will give a brief lesson about Pakistan's relations with major World Powers.
Activity-2 **(Group Work)** **(10 minutes)**	4. Teacher will make four groups (A, B, C, D). 5. Chart and marker will be given to the students to write down name and capitals of World Major Powers. 6. One volunteer from each group will share the names of world major powers and their capitals.
Students **Assessment** **(3 minutes)**	Teacher will ask questions from each group and also give feedback to the students: Group-A: Tell three major powers and their capitals name. Group-B: Tell three major powers and their capitals name. Group-C: Tell three major powers and their capitals name. Group-D: Tell three major powers and their capitals name.
Home Work **(2 minutes)**	Write and learn main features of Pakistan's relations with USA and China in agricultural, social and educational sector.

Procedure:

This class is an experimental group. Teacher will provide mentoring intervention according to CPD framework mentoring areas. Taleemi calendar will be followed for SLO's. Lesson planning will be done. Activity based teaching & learning, use of resource material and classroom management will be ensured. Homework will be checked. Teacher student interaction will be focused. The teacher will discuss and write SLO's on the board. The students in this class will be divided into four groups and each group will be comprised of 5 students. They will be divided randomly into four groups named as group A, B, C and D. General classroom allocated for 10th class will be used for the process of teaching learning.

SCHEDULE OF THE TEACHER TRAINING

In the present CPD mentoring framework training, all activities were carried out under the guidance of researcher. The Pakistan Studies Teacher completed the cycle of one week mentoring training. The detailed mentoring schedule is given below:

Sr. No	Mentoring Area	Days	Duration
1	Taleemi Calendar & Lesson Planning	Day 1	1 hour
2	Activity Based Teaching & Use of Support Material	Day 2	1 hour
3	Classroom Management	Day 3	1 hour
4	Interaction with Students	Day 4	1 hour
5	Students Assessment	Day 5	1 hour
6	Home Work	Day 6	1 hour

DETAIL OF CPD MENTORING AREAS

The Pakistan Studies Teacher was trained on these mentioned CPD framework mentoring areas. These mentoring areas are comprehensive for the professional development of teacher.

Sr. No	Mentoring Area	Focused on	Teacher Role
1	Taleemi Calendar	1. Scheme of studies 2. Build up context 3. Relation of SLOs with Taleemi Calendar 4. Relation of practices with SLOs	1. Checking the Taleemi Calendar before lesson planning and select the relevant SLOs. 2. Talking about the selected SLOs in a clear and specific manner. 3. Writing down the SLOs on the board.
2	Lesson Planning	1. Executing teaching 2. Promoting learning 3. Adopting strategies 4. Planning activities	1. Explaining importance of lesson planning. 2. Consulting teacher diary. 3. Selecting content for logical treatment. 4. Selecting techniques to adhere the lesson.

3	Activity Based Teaching and Learning	1. Set of activities 2. Learning by doing 3. Sharing learning 4. Enhancing learning	1. Assessing understanding. 2. Sharing practical examples. 3. Adopting learning activities. 4. Utilizing resources and time.
4	Use of Support Material	1. Illustrate learning 2. Facilitate learning 3. Cost-effective material 4. Use of teacher guide	1.Understanding on support material. 2. Exemplifying different examples. 3. Selecting tools for teaching. 4. Availability of support material.
5	Interaction with Students	1. Promote interaction 2. Skills of engaging students 3. Skills of Question Answers 4. Increase participation	1.Demonstrating and explain benefits of good interaction. 2. Tone of talking high and low. 3. Presenting two way process. 4. Focusing the slow learners.
6	Classroom Management	1. Handling problematic children 2. Involvement of students 3. Art of classroom organization 4. Setting of teaching stages	1. Setting plan of classroom. 2. Handling different groups and focus on problematic children. 3. Availability of teaching tools at hand. 4. Tactics of learning.

7	Students Assessment	1. Process of authentic learning 2. Assessing written work 3. Developing & evaluating student portfolio 4. Selecting types of assessment	1. Assessing authentic learning. 2. Differentiating old and new form of assessment. 3. Balancing oral and written forms of assessment. 4. Using feedback for learning.
8	Home Work	1. Concept of Home Work 2. Written home work 3. Supplement classroom learning 4. Checking homework	1.Explaining what constitute good homes work. 2. Reflecting varied abilities of the students. 3. Proper guidelines for written home work. 4. How to evaluate the homework.

The CPD framework mentoring training was executed by the Pakistan Studies Teacher. The area-wise guidance provided to the Pakistan Studies Teacher detail is as under:

i. Mentoring Area-1, "Taleemi Calendar"

The Pakistan Studies Teacher were provided guidelines to incorporate the following interventions in their classroom teaching against each mentoring area while teaching to the experimental group:

1. Checking the Taleemi Calendar before lesson planning and select the relevant SLOs.

2. Talking about the selected SLOs in a clear and specific manner and write down the SLOs on the board.

ii.   Mentoring Area-2, "Lesson Planning"

1. Ensuring that the lesson plan being made can be executed in the classroom in the available resources and time.

2. Consulting teacher's diary and curriculum during the lesson to keep it on track.

3. Making a checklist on a page or onboard to ensure adherence to the plan.

iii.   Mentoring Area-3, "Activity-Based Teaching & Learning"

1. Planning a variety of activities and reflect it in the lesson plan and write it in the teacher diary.

2. Selecting diverse activities to engage the maximum number of students in the available resources and time.

iv.   Mentoring Area-4, "Use of Support Material"

1. Select relevant and instructive support material from the subject book while planning the lesson and list them in the teacher's diary properly.

2. Ensuring that the planned support materials are available at hand before starting the lesson.

v.   Mentoring Area-5, "Interaction with Students"

1. Thinking about different ways to involve those students in the class who do not participate in class.

2. Planning the lesson in such a way that all students be involved especially the slow learners.

3. Arranging the class in such a way that all students can get the maximum chance to participate in classroom activities.

4. Encouraging all the students to speak and participate in class activities.

vi.   Mentoring Area-6, "Classroom Management"

1. While planning the lesson, thinking about the arrangement of seating plan keeping in mind the planned activities, disruptive students, and weak students.

2. During the lesson execution, establishing norms for the conduct of the classroom and enforce these norms throughout the lesson.

3. Identifying disruptive students regularly and working out strategies to manage the class well.

vii.   Mentoring Area-7, "Students Assessment"

1.   Select relevant questions from content/book and conduct assessment during the lesson.

2.   Categorizing the correct and incorrect answers given by students and give them proper feedback.

3.   Appreciating the students on good responses and proper solutions be given for incorrect responses.

viii. Mentoring Area-8, "Home Work"

1. Ensuring that all students have properly maintained written work notebooks.

2. Planning relevant and engaging written work for the students using textbook andd conduct classwork or homework at least daily.

3. Assessing written work of all students regularly and give them proper feedbackk regularly on their work also appreciate the good homework.