

**ANALYSIS OF PROBLEM SOLVING SKILLS AMONG  
HEAD TEACHERS WITH TRANSACTIONAL OR  
TRANSFORMATIONAL LEADERSHIP STYLES AT  
PRIMARY SCHOOL LEVEL**

**By**

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**NATIONL UNIVERSITY OF MODERN LANGUAGES  
ISLAMABAD**

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**Shah Hussain**

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT  
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## THESIS/DISSERTATION AND DEFENSE APPROVAL FORM

The undersigned certify that they have read the following thesis, examined the defense, are satisfied with the overall exam performance and recommend the thesis to the Faculty of Social Sciences for acceptance

Thesis Title: ANALYSIS OF PROBLEM SOLVING SKILLS AMONG HEAD TEACHERS WITH TRANSACTIONAL OR TRANSFORMATIONAL LEADERSHIP STYLES AT PRIMARY SCHOOL LEVEL

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Candidate of **Master of Philosophy** at National University of Modern Languages Islamabad do hereby declare that the thesis **Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational leadership styles at primary school level** submitted by me in the partial fulfillment of MPhil degree in Education is my original work and has not been submitted or published earlier. I also solemnly declare that it shall not be submitted by me for obtaining any other degree from this or any other university or institution in future.

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## ABSTRACT

**Thesis Title:** Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level.

The present study aimed to assess the problem solving skills and determine the transactional or transformational leadership style of head teachers at primary school level. Furthermore, this study analyzed the problem solving skills among head teachers with transactional or transformational leadership style at primary school level. The nature of the study was quantitative and descriptive method was adopted to describe the collected data from 210 head teachers employed in five educational sectors in Islamabad. The total population of head teachers was 256. The researcher used two set of questionnaires as a research tool to collect information from the respondents. Data was analyzed by SPSS version 20<sup>th</sup> by applying statistical tests such as mean and correlation. Out of 200 head teachers 154 perceived transformational while 46 have transactional leadership style to solve problems. Findings show that majority of head teachers were agreed that they have problem solving skills to solve the problem and used transformational leadership style at primary level. Moreover, head teachers whose adopt transformational leadership style were mostly solving problem than transactional leadership style at primary school level. On the basis of findings, it was recommended that head teachers may provide an environment such as better work condition, collaborative working environment and appraisal to enhance the motivation of teachers because motivation enable teachers to solve problem with confidence. Breaking down silos strategies may allow head teachers to more easily engage their subordinates to solve problems. Trainers may design problem solving courses in teachers training programs where they can learn to identify, define and examine the possible solution of problems. Transformational leadership style may introduce for head teachers and teachers through work shop, training and seminars by sharing vision, creating trust and raise the expectation. Transactional leadership training program may be conducted where head teachers and teachers receive instructions on goal setting, performance feedback, and contingent reinforcement. Ministry of education and education department may organize seminars, conferences and lectures to develop and implement transformational leadership at primary level and its impact and implication on problem solving skills.

# TABLE OF CONTENTS

CHAPTER	Page No.
DISSERTATION AND DEFENSE APPROVAL FORM.....	ii
AUTHOR DECLARATION FORM.....	iii
ABSTRACT.....	iv
TABLE OF CONTENT.....	v
LIST OF TABLES.....	v
LIST OF FIGURES.....	viii
LIST OF APPENDICES.....	xii
ACKNOWLEDGEMENT .....	xiii
DEDICATION.....	xiv

## 1. INTRODUCTION

1.1	Background of the study.....	1
1.2	Rationale of the Study.....	3
1.3	Significance of the Study.....	4
1.4	Statement of the Problem.....	4
1.5	Objectives of the Study.....	5
1.6	Questions of the study.....	5
1.7	Hypothesis of the study .....	5
1.8	Conceptual framework of the study.....	5
1.9	Delimitation.....	7
1.10	Operational definition .....	7
1.11	Research methodology .....	9
1.12	Ethical consideration .....	10
1.13	Summary of the chapter.....	10

## **2. REVIEW OF THE RELATED LITERATURE**

<b>2.1</b>	Problem solving skills .....	12
<b>2.2</b>	Dimensions of problem solving skills.....	17
<b>2.2.1</b>	Problem solving confidence.....	17
<b>2.2.2</b>	Approach avoiding style.....	18
<b>2.2.3</b>	Personal control .....	19
<b>2.3</b>	Problem solving steps.....	19
<b>2.4</b>	Leadership .....	21
<b>2.5</b>	Leadership theories.....	21
<b>2.6</b>	Leadership styles.....	25
<b>2.7</b>	Transactional leadership.....	26
<b>2.7.1</b>	Dimensions of transactional leadership.....	29
<b>2.7.1.2</b>	Contingent-Reward.....	29
<b>2.7.1.3</b>	Management by exception .....	30
<b>2.8</b>	Transformational leadership .....	31
<b>2.8.1</b>	Dimensions of transformational leadership .....	37
<b>2.8.1.1</b>	Idealized influence .....	37
<b>2.8.1.2</b>	Inspirational motivation .....	37
<b>2.8.1.3</b>	Intellectual stimulation .....	38
<b>2.8.1.4</b>	Individualized consideration.....	38

## **3 RESEARCH METHODOLOGY**

<b>3.1</b>	Research design .....	40
<b>3.2</b>	Population of the research.....	40
<b>3.3</b>	Sample and sampling techniques .....	41
<b>3.4</b>	Variables of the study .....	41
<b>3.5</b>	Tools of the study.....	41
<b>3.6</b>	Pilot testing .....	42
<b>3.7</b>	Data collection .....	46
<b>3.8</b>	Data analysis .....	47

#### **4. DATA INTERPRETATION**

4.1	Analysis and Interpretation of Data.....	49
4.2	Summary of the data Analysis.....	49

#### **5. SUMMARY, FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

5.1	Summary .....	76
5.2	Findings .....	77
5.3	Conclusion.....	80
5.4	Discussion .....	83
5.5	Recommendations .....	85



## LIST OF TABLES

<b>Table No</b>	<b>Title</b>	<b>Page No.</b>
Table 3.1	Alpha reliability coefficient of problem solving skills scale	43
Table 3.2	Alpha reliability coefficient of transformational leadership scale	43
Table 3.3	Alpha reliability coefficient of transactional leadership scale	44
Table 3.4	Inter scale correlation of problem solving skills scale	44
Table 3.5	Inter scale correlation of transformational leadership scale	45
Table 3.6	Inter scale correlation of transactional leadership scale	45
Table 3.7	Item total correlation	46
Table 3.8	Calculated sample size	47
Table 3.9	Objectives, hypothesis, research questions and statistical tests	48
Table 4.1	Gender wise demographics	51
Table 4.2	Experience wise demographics	52
Table 4.3	Age wise demographics	53
Table 4.4	Professional qualification wise demographics	54
Table 4.5	Assess problem solving confidence	55
Table 4.6	Assess approach avoiding style	57
Table 4.7	Asses personal control	60
Table 4.8	Problem solving skills	61
Table 4.9	Determine the idealized influence	62
Table 4.10	Determine inspirational motivation	64
Table 4.11	Determine intellectual stimulation	65
Table 4.12	Determine individualized consideration	66
Table 4.13	Transformational leadership style	67
Table 4.14	Determine contingent reward	68
Table 4.15	Determine management by exception	70
Table 4.16	Transactional leadership style	71
Table 4.17	Analyze problem solving skills with transformational leadership style	72

Table 4.18	Analyze problem solving skills with transactional leadership style	72
Table 4.19	Correlational analysis of problem solving skills with sub-scales of transformational and transactional leadership style	73
Table 4.20	Correlational analysis of problem solving skills with transformational and transactional leadership style	74
Table 5.1	Alignment of objectives, findings, conclusion and recommendation	87

## LIST OF FIGURES

<b>Sr. No</b>	<b>Title</b>	<b>Page No.</b>
1	Conceptual framework	6
4.1	Gender wise demographics	51
4.2	Experience wise demographics	52
4.3	Age wise demographics	53
4.4	Professional qualification wise demographics	54

## **LIST OF APPENDICES**

APPENDIX A	RESEARCH TOPIC AND SUPERVISOR APPROVAL LETTER
APPENDIX B	RESEARCH TOOL
APPENDIX C	PERMISSION LETTER OF TOOL
APPENDIX D	REFERENCE LETTER FOR DATA COLLECTION FROM NUML
APPENDIX E	COVER LETTER OF TOOL
APPENDIX F	LETTER FOR REQUEST OF TOOL VALIDATION
APPENDIX G-K	TOOL VALIDATION CERTIFICATES
APPENDIX L	PROOF READING CERTIFICATE
APPENDIX M	LIST OF SCHOOLS

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**Shah Hussain**

**DEDICATED**  
**TO**  
**MY MOST LOVING PARENTS**

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the study

In the past two decades in different fields of professionals the concept of life skills or soft skills has established much attention. Life skills enable someone to deal with the conflict that cannot be resolved, problems solving, dealing with authority, keeping and making friendship with friends, creative thinking, innovative thinking, self-awareness, cooperation, clarification of values, dealing with stress, negotiation, values clarification, pressure resisting, handling with disappointment, empathy, sympathy, planning ahead, acting listening, dealing emotions, confidence, trust, tolerance, respect, self-esteem, compassion, sociability, sharing, global citizenship, interpersonal skills, media and information literacy (Shek et al. 2021).

Problem solving skills are the abilities of anyone to use in a very accurate and effective way to solve the problems. These skills are a type of cognitive skills which involves the learned rules from previous experiences, finding and applying new solutions to the problems in life (Ercevik & Koseoglu, 2020).

An important role is played by these skills in the teaching and learning process. To formulate new answer for the creation of solution and each step of the process is closely related to the next one and also with the previous step. Main purpose of education is not only to transform the knowledge and skills but also to solve the problems and make the decision with the help of new knowledge and skills (Irwanto et al.2018).

Problem solving skills and job performance have a significant relationship with each other. With the help of collaborative work and working in groups result significant relationship in problem solving skills with performance. The significant relationship in the process of problem solving skills is only occur in the result of collaborative work within the groups or teams (Rosen & Tager, 2013).

The learning and achievement of student are dependent on the leadership in education. Achievement of the student is linked with leadership which give the significant outcomes in schools (Huguet, 2017).

Overall performance of the school level organization was determined by the leadership

of a school head-teacher. To perform his duties as educator and administrator, head-teacher is a person with formal leadership duties, responsibilities to provide a workable environment and make the climate of work for staff to achieve the selected goals of the school. School leader knows how to keep the level of the organization or school to stay in an accurate direction (Andriani, Kesumawati & Kristiawan, 2018).

The modern style of leadership style is transformational leadership style which possesses certain significances and focus on academic groups, it helps the organization to find new methods in the modern world (Gong et al. 2009).

Leader motivates his/her subordinates to achieve the organizational goals and objectives in the transformational leadership style. For head of a school apply transformational leadership to raise awareness in teachers and importance of tasks in education to motivate their high level of needs. The aim of transformational leadership is to build a relationship among schools heads and teachers of school (Bass, 1995).

Research has indicated that transformational leadership is composed of the four I's including: idealized influence, intellectual stimulation, inspirational motivation and individualized consideration. Study about transformational leadership shows that functions and roles of each Four I's show that foundations of the employee's growth are refined to generate a full substance and base for transformational leadership practices (Tharnpas & Sakun, 2015).

In the strength of any educational institution the value of the teachers plays a significant role. The whole transformation system depends on the teachers who help an individual into the person of imagination, intelligence, human love and information, and organizations into lights of the future generations, and the state into an education culture. Moreover, the task related leadership style is transactional leadership in which leader focus on the achievement of organizational goals through work productivity, supervision and realization. In this style leaders used punishment or reward system keeping in mind the completion of work on time, standards, efficiency and effectiveness (Siddique & Nawaz, 2019).

In the society of 21<sup>st</sup> century the needs of a teacher not only to have knowledge but also having high motivated skills, sincerity, committed to their profession and bring changes for the betterment of society. The integral part of an effective management is leadership. The transformation of a lackluster group into a successful organization can be done with the transformational leader. There should be a strong relationship between head teacher and teachers



for the higher performance. The head teachers should motivate groups and adjust the behavior of teachers that they are working hard for objectives of organization. For that the head teachers apply transformational leadership behavior to motivate the teachers. (Louis & Tara, 2010)

## **1.2 Rationale of the Study**

Problem solving skills of any individual or a representative of any organization are directly related to overall performance of the institution which they represent. In majority of cases, the heads of the institution takes either of the two leadership styles: transformational and transactional. Transactional leadership style is characterized by the adaption of reward and punishment mechanisms while transformational leadership style characterized by adaption of motivating and encouraging tools. Thus, both styles have a different approach towards problem solving, and obviously, there should be the difference of outcomes. The head teachers of primary school are also having the leadership roles, and their leadership and problem solving skills may have an impact on the overall performance of schools. The one thing that becomes evident is that the head teachers of primary school have to adapt transformational or transactional leadership styles. The researcher attempts to analyze the skills of both the leadership styles, and intends to evaluate that which leadership style is more effective in articulating the overall performance of institution, school. To conduct the whole study in the above mention paradigm, their needs to be investigated the actual relationship between skills adapted for problem solving and outcomes. The personal experience of the researcher is a primary school teacher and countless studies conducted by the sociologists, educationalists, management specialists and prominent economists suggest that the different skills adapted by head of different institution regarding problem solving have different outcomes.

Individual who needs to complete any type of task, project or assignment face problem, go to several different types of steps or stages. These problems require some area of specialization, specific methods of related subject (Abosede & Adesanya, 2017).

For instance, there is a significant effect of the leadership style on the performance of teacher. If school leader deals with teachers in a friendly manner, then the performance of teachers would be significantly improved. Otherwise, the teachers will give negative outcomes related to their performances (Asbari, Santoso & Purwanto 2019).

Another research study similarly presented that there is a constructive connection among transformational leadership styles and performance of the teachers, and negative relationship with transactional leadership and job performance of the teachers (Maheshwari, 2021).

Sunarsi et al., (2021) also found that transactional leadership style has no significant effect on employee satisfaction, either directly or indirectly through mediating job perceptions.

Hulaikah et al., (2020) results show that problem-solving ability of students taught by experiential learning was different from the ones taught by direct instruction, the students' problem-solving ability differed between high and low adversity quotients, and there were interactions between experiential learning and adversity quotients that improved students' problem-solving ability.

In both administration and leadership, the head teacher in private schools are high performing and proactive. School leaders in private institutions are engaging with teachers, share ideas with them and motivate them to bring news ideas for the betterment of the school (Singh & Allison, 2016). Poudyal (2013) found that the transactional leadership style of head teachers is authoritative in the schools.

In the light of above mentioned studies the researchers comes to the point that every kind of problem solving skills applied and outcomes that differs from the results of other skills applied. Thus, skills of both the transformational and transactional leadership styles are different, and it automatically become evident that their results would also be different, the rest of the research will be directed to find out the best leadership styles in terms of outcomes.

### **1.3 Significance of the Study**

The current study will be helpful for all stakeholders linked with the field of education. They can be policy makers, educational experts, researchers, head teachers, teachers and students. The findings of this study may be useful for the Ministry of Education and school leaders to bring required changes in the school environment and leadership practices to enhance teachers' problem solving skills and their performance. This study is also fruit full for the policy makers, curriculum developers and researchers for further research. Head teachers and all stakeholders will solve their problems using problem solving skills according to transformational leadership style. Head

teachers will focus more on transformational leadership style other than transactional leadership style.

## **1.4 Statement of the Problem**

Problem solving skills, transactional and transformational leadership styles of head teachers play an important role in development of any educational institution. Studies have been done on leadership styles and problem-solving skills in different areas of the world. Problems in the school can be solved in correct way of leadership style of head-teachers in school. Problem solving skills are the difficult skills that faced by head teachers. Researcher investigated the relationship of problem solving skills with transactional leadership style or transformational leadership style among head teacher at primary schools level.

## **1.5 Objectives of the Study**

The following are the main three objectives of the study:

1. To assess the problem solving skills of head-teachers at primary school level.
2. To find out the transactional or transformational leadership style of head-teachers at primary school level.
3. To analyze the relationship of problem solving skills of head-teachers with transactional or transformational leadership style at primary school level.

## **1.6 Research Questions**

1. What type of problems solving skills do you follow when you face problems as a head?
2. Which leadership style (Transactional/Transformational) mostly did you use to solve your subordinates problem?

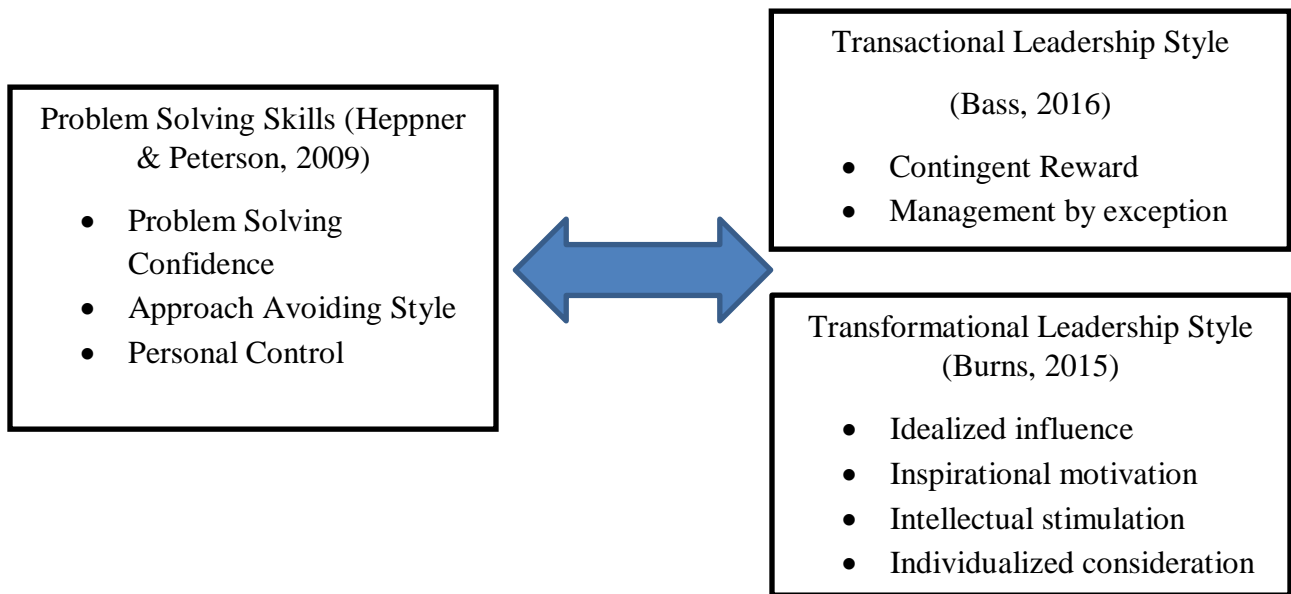
## **1.7 Research Hypothesis**

The following was the null hypothesis of the study

**Ho 1:** There is no significant relationship among problem solving skills, transactional leadership style or transformational leadership style of head teachers.

## 1.8 Conceptual frame work

An inventory developed by Heppner and Peterson in 1982 to support the problem solving skills is called problem solving inventory. To provide a global appraisal of an individual to make him as a problem solver was assessed by the problem solving inventory which measure evaluation and individual awareness of their problem solving abilities. A belief and trust in one's problem solving abilities is occurred in the problem solving confidence, approach avoiding style give the option to choose whether avoid or to approach the different problem solving abilities and the control on the emotions and behavior on his or herself is happened in the personal control in the problem solving. Problem solving inventory have the above three main factors.



*Fig: Conceptual Framework of the study.*

This figure shows that there are two independent variables transactional and transformational leadership styles. Contingent reward and management by exception are the two constructs of transactional leadership style. Idealized influence, inspirational motivation, intellectual stimulation and individualized consideration are the four dimensions of transformational leadership style. The current study is supported by three main theories. Problem solving skills is the dependent variable and its constructs are; personal control, problem solving confidence and approach avoiding style. In this study the impact of leadership style either

transactional or transformational on the problem solving skills of head teachers was checked by the researcher.

Second variable transformational leadership style was introduced by Burns when he was studying political leaders (Burns, 1978). Later on (Bass, 1985) carried out the theory of transformational leadership. Four dimensions of transformational leadership in this theory are idealized influence in which the leader sets him/herself an example for his/her subordinates, inspirational motivation provide the leader has clear vision and shared mission to motivate his/her followers, intellectual stimulation bring the new ideas, problem solving skills and critical thinking in his/her team members and individualized consideration provides the direction to the leaders to consider every member of organization with different identity and seek their personal needs.

The methods and techniques for giving the reward and punishment to the subordinates choose by the leaders for the achievement of organizational goals and objectives done in transactional leadership style. Contingent reward and management by expectation are two main dimensions of transactional leadership. The leader used process of exchanges with the followers for the specific types of completion of tasks in contingent reward. In management by exception the leader criticize, negative feedback and negative reinforcement with followers. In this dimension the leader closely watches all mistakes of followers (Northhouse, 2015).

## **1.9 Delimitation of the study**

Researcher was collected data from head teachers of only government primary level schools of rural and urban regions of Islamabad due to time constraints. Researcher only chooses schools of Islamabad because of limited resources of money and time.

## **1.10 Operational definitions**

### **Head teacher**

A person having the responsibilities to rule, manage and organize all school matters is called head teacher.

### **Problem solving skills**

Problem solving skills are the abilities and skills of an individual to solve a problem.

### **Problem solving confidence**

An individual's beliefs in their ability to effectively identify, analyze, and solve problems is referred to as problem solving confidence

### **Approach avoiding style**

Approach avoiding style refers to a particular approach in which an individual approach or avoid when facing problems.

### **Personal control**

When facing problems the ability of someone to control and influence their own thoughts, behavior and emotions is said to be personal control

### **Leadership**

Leadership is an effective procedure by using an individual motivation and lead an individual or group of people to gain the common goals.

### **Leadership style**

Leadership style is a way of acting and way of behaving with his/her subordinates to achieve the common goals.

### **Transactional leadership**

In this leadership style leader motivates their team members by using extrinsic rewards of their good work and punishment for poor work performance in order to get the short term goals.

### **Transformational leadership**

Transformational leadership is a leadership style where leader motivate their followers by providing enthusiasm, motivation, encouragement and intrinsic rewards to achieve the long term goals and objectives of organization.

### **Contingent-Reward**

Rewards given by the head to his/her subordinate on the completion of a given task with positively.

### **Management by exception**

To inspire followers, provide them a positive vision and observing overall performance of organization.

### **Idealized influence (II)**

Idealized influence is defined as the leaders who inspire their followers by the result of his/her behavior.

### **Inspirational motivation (IM)**

The ability of a leader to inspire her or his followers for the sense of purpose and bring confidence and motivation is said to be inspirational motivation.

### **Intellectual stimulation (IS)**

An intellectual stimulation the leader encourages motivation, creativity and problem solving in the followers.

### **Individualized consideration (IC)**

An Individualized consideration in which a leader consider each follower's needs, ideas and suggestions.

## **1.11 Research methodology**

Two adapted questionnaires were used to collect the data. Leadership style questionnaire was used for transactional and transformational leadership (Khadka, 2020). Problem solving inventory consist of problem solving confidence, approach avoiding style and personal control are three dimensions was used to check the problem solving skills of head-teachers (Heppner & Petersen, 1982). The design of the study is quantitative in nature and 210 head teachers from primary level were selected as sample of the study. The data was analyzed using the SPSS version 2020.

## **Design of the study**

The design used in this study was descriptive. To collect the requisite data questionnaires were used for the data which analysed the problem solving skills among head teachers with transactional or transformational leadership styles at primary school level in Islamabad.

## **Population**

Under the jurisdiction of Federal Directorate of education Islamabad all the head teachers who are working both rural and rural areas schools were population of the study.

## **Sample**

The sample of the study consisted of all head teachers selected through census sampling technique and there are 210 public schools in Islamabad. Both urban and rural primary schools were selected for this study.

## **Instrumentation**

Two sets of standardized adapted questionnaires were used for the collection of data in research. Problem Solving Inventory developed by Heppner and Petersen (1982) was used to assess the problem solving skills of head-teachers. self-rating is a scale of problem solving inventory consist of twenty five item attached with a five point likert scaling style starting with the choices ranging Strongly Disagree (SA) =1, Disagree (A) = 2, Not Sure (NS)= 3, Agree (A)= 4, and Strongly Agree (SA) = 5. Problem solving confidence (PSC), approach avoiding style (AAS) and personal control (PC) are three dimensions inside the problem solving inventory. Overall score of instrument is measured by self-appraised problem solving ability. Heppner and Peterson (1982) developed an inventory starting from .70 to .89 have alpha coefficients.

Leadership style questionnaire consists of thirty two items scale was used to find out the transactional or transformational leadership styles of Head-Teachers. A 5-point Likert scaling style with choices ranging 1 = Strongly Agree (SA), 2 = Agree (A), 3 = Not Sure (NS), 4 = Disagree (D), and 5 = Strongly Disagree (SD). Two styles were discuss in the MLQ are the transactional also transformational leadership styles. The motivation of employees and the exchange of process were categorized in transactional leadership style. The transformational leadership style is considered by joining leaders and followers to achieve the shared goals.



## **Data collection**

As described above the data was collected by using two sets of instrument compiled into a questionnaire. On the selected sample and explanations the researcher was given where it is necessary the instrument was personally administered. Out of 210 the response rate is 200..

## **Data analysis**

By using Mean, percentage and correlation at the 0.05 level of significance the data was analyzed by using SPSS.

## **1.12 Ethical Considerations**

Three main principles required for the ethical consideration of a research study: 1) principle of autonomy; 2) principle of non-maleficence, 3) and principle of beneficence. The first one principle of autonomy stated that the researcher must inform the respondents and give them a chance to choose whether respondents contribute or quiet from the study. The second principle non-maleficence need that the study don't practice any harm at the time they participate in the research. The last one principle of beneficence means that the study must be used for the public good and welfare. The researcher followed all three principles in the current study.

## **1.13 Summary**

The above chapter of research provided the impression of research study. This chapter was based on background of the study, rationale of the study, significance, problem statement, objectives, questions, and hypothesis. Furthermore, it highlights the statistical framework, delimitations and operational definition used in the study. It also mentioned the instrumentation process, collection of data and data analysis. The conceptual framework was adopted on the basis of three main theories. Related research is discussed in the next chapter of the study.

## CHAPTER 2

### REVIEW OF LITERATURE

Review of the related literature was consists of two sections. Section first was related to problem solving skills and the second section discussed leadership styles (transactional and transformational).

#### 2.1 Problem solving skills

Now a day the most trending discussed topics in the 21<sup>st</sup> century are the skills. Problem solving skills help learners in the development of 21<sup>st</sup> century is require education to prepare them and make them able to face the demands of life (Kurniawan, 2016). Problem solving skills are improved by the problem because that problem enables students to synthesize, evaluate and analyze it (Ültay, 2017).

It meaning that the movement between the present conditions to the expected condition, to choose the way out that can be done in accordance with the ability possessed by someone itself that requires a person to use the problem solving is as activity (Khoiriyah & Husamah, 2018).

All sub-dimensions of teacher self-efficacy beliefs of problem solving skills and critical thinking disposition are the important finding is that there were significant and positive predictors (Cansoy, Türkoglu & Emin, 2017).

Creative and critical thinking dispositions of the school administrators were both predicted problem solving skills and decision making styles moreover, it was determined that avoidant, rational, and spontaneous decision-making styles of school administrators are significantly predicted the problem-solving skills (Ozgenel, 2018).

Problem solving skills and critical thinking skills, communication and collaboration, and creativity and innovation are core skills of 21<sup>st</sup> century (Kay, 2010). Through collaborative approach problem solving skills are develop and other skills like brainstorming, group work, cooperative and collaborative work, problem based learning and inquiry based learning will be done on pedagogical approaches results students to self-determined, lifelong learners and highly autonomous (Wismat & Orr, 2015).

In the era of 21<sup>st</sup> century students must have problem solving skills and creative thinking skills and there are some challenges teachers are still facing. With the help of problem based learning the learning outcomes improve the creative thinking skills and problem solving skills of seven grade students. Student worksheet assessment obtained data from the problem solving skills, performance grading rubric result the data of creative thinking skills and end of cycle essay test find the learning outcome data. 11 percent was the average of creative thinking skills and 17.5 percent completion rate, 27 percent was average of problem solving skills and 47 percent of completion rate and 3 percent was the average score of learning outcomes and 15 percent of completion rate, all are the result of problem based learning implications. The result show that teachers increase the problem solving skills, creative thinking skills and learning outcomes by the use of problem based learning (Khoiriyah & Husamah, 2018). In the 21<sup>st</sup> century the important one competency is problem solving and today world the employer needs to know the solving of non-routine problems (Ergul, 2017).

Irwanto et al., (2018) conducted a quasi-experimental using random sampling study to find out the difference among pre-elementary teachers using traditional lecture and process oriented guided inquiry learning to search their problem solving skills and critical thinking skills, and check the correlation between problem solving skills and critical think skills. The findings of the study show the significant differences among problem solving skills and critical skills. It's recommended that with the use of process oriented guided inquiry learning increased the higher order thinking skills of students in lectures.

Problems possess primary goals, state as well as the approach to gain that goal (Woolfolk, 2010). When there is certain statement the problem will occurs, it is necessary to achieve the interest of statement and method for solutions neither present there (Mayer, 2003). So problem solving is defined as the next phase to change the statements into desired goal (Lovett, 2002). Through a process, the ability to find a solution which includes gaining and organizing information (Santrock, 2011). Moreno (2010) recommends that solving is a careful procedure that consists of the problem, to solve the problem develops a hypothesis, check different type of hypotheses, and choosing the best suitable alternative. Problem solving skills can be defined as groups or individuals try to discover answers for the problem which are based on the previous understanding in order to achieve the solutions demand which is not normal (Hardin, 2002).

Presented the format of questions representation of the problem character and the student structure of knowledge are the factors affecting problem solving (Cock, 2012). Students use qualitative arguments which is based on the science of concept that identify the problem, estimate the solutions and lean towards the use of representations tools have high ability in problem solving while students lean towards the recognition of problem which is based on the grain issue and did an evaluation have low ability of problem solving (Mason & Singh, 2011; Savelsbergh, et al, 2011).

Based on artificial intelligence and problem solving skills theory of information processing present problem solving skills. Introspection, observation and the development of heuristics includes in cognitive psychology which showed in the process of problem solving. Towards the problem solving and mental process of learning the development of cognitive psychology as a discipline, effort and interest. To identify the mental stage and constant with the problem solving, the problem solving is the early cognitive approach (Hardin, 2003).

According to (Moreno, 2010) four process of problem solving in learning of students consist of attention which is information learned in the working memory by the process of allowing cognitive resources on the existing of task, the second one retention is the process given by the behavior which was observed next transferred to the memory of working, in the long term memory by creating a visual representation students need to encode information, the third one production is convert the mental representation encode formed for the duration of encoding into motor activity. To offers many teaching opportunities are completed by the response to guide this process is finished by splitting the process which learned the smaller steps and the last one was motivation need to reproduce what students learned and motivated from of model. The use of realistic problems, highlighting several perspectives and the support by the nearest development region is the learning characteristics of problem solving (Schunk, 2012).

Through the support of teachers and friends stated by the Vygotsky idea of proximal development zone that students are helped to higher level of achievement (Santrock, 2011).

Depends on the teacher what students can do at first stage, however after the mastering the most independent task of learning and achieve the control over new functions. The responsibility of the teachers is to provide conditions and an environment that provides students to learn new

learning things and master new skills. Teacher and student are more skilled are adjust the amount of direction in order to meet the requirements of student (Santrok, 2011).

Based on the theory of socio-cognitive the aim of the learning science is to develop the problem solving skills. To observe or observing the consequences of other people behavior is the result of learning focused by Albert Bandura. In social context various things can occur someone to learn by imitating and observing the behaviors of others people (Moreno, 2010).

By sitting self-regulated learning students can evaluate the learning process and student ability to control all aspects of their own learning (Moreno, 2010).

To achieve the goal of learning science such learning is expected. Aydogdu et al., (2012) result states that assessment and learning of the problem solving skills is indispensable and the student needs at the level of school and career need the ability to work and apply the problem solving skills during real situations.

A significant decrease was showed from the routine and non-routine tasks of economic measurement while the increased was showed in complex communication and higher level of problem solving skills (Levy & Murname, 2014).

Complex communication and problem solving skills are the higher level of thinking skills which are very important to the students they face in the world to complete the work. Through science teaching consist problem solving competence must be achieved which based on the range of materials science (Kemendilbud, 2014).

In junior high school students the problem solving skills in science teaching show importance practice. By providing experience that needs different strategies starting from one issue to another issue is the way to teach problem solving skills and present a specific approach to the students need careful planning.

According to Ommundsen (2001) to complete the problem solving solution four steps are required. Understanding the problem is the first step, students will not able to solve the problem properly without the understanding of the given problem. Once the students understand the problem properly, after that they are able to plan the purpose. Depending on their experience the second phase dose by the ability. Problem solving plan has been made. Then solve the problem

accordance with the plan. And the last step of the plan was to check what has been done through the first to the last phase. Examine or think about the steps which have been in the process of problem solving is very important activity for the improvement of problem solving skills.

A study was conducted by Angawi, (2014) revealed that review the settlement procedure are very important factor which has been made to increase the students problem solving skills while solving a problem.

In the field of education augmented reality is very popular in recent years. From this new technology a lots of positive result are obtained. The self-control level, problem solving skills and achievement of the students are increased due to the use of it (Karghozlu, 2018).

To overcome easily in daily life the problem solving skills help individuals. Problem solving skills make an individual self-confident, independent and creative thinker (Özreçberoğlu & Çağanağa, 2018).

In classrooms students are not involved by teachers use to analyze the non- routine problem which makes self-confident, produce alternative ways and judgment (Isik et al., 2011).

By using creative thinking skills and different strategies non-routine problems which are not solved by specific formulas (Memnum, 2015).

Among the desired goals and the existing state problem is considered a disparity between them or a difficulty to gains the goals and organizational level routine problems are front of managers for making their attention in the given agendas (Daft, 2014).

The identification of gap among goals and reality and taking of actions to find the solution is said to be problem solving and managers make it simple to become problem solvers (Shermerhorn, 2013).

For employers one of the most desirable employment skills are considered problem solving skills, many organizations manage the teams and they are providing problem solving skills to their managers (He, 2015).

Hamalainen et al., (2015) build a study to understand the problem solving skills of adults. In technology rich environment the vocational and training education is weak in adults with more than two third. Factors effecting like gender, age, every-day life, occupation and education in

years but training educational system and vocational education does not associated with lower performance of adults. To handle the educational issues and learn as a thoughtful leader so leaders need to share problem solving skills and collegial collaboration with each other to tackle educational issues in schools. To enhance professional relationship inside institutions and individuals coaching leadership is building the capacity of leadership. Professional and personal goals needed to meet which are based on energy and harnessing the ongoing commitment, and importance to maximize the potential (Jan, 2016).

Problem of tomorrow will be solve by young leaders of today apply science, technology, engineering and math activities in schools. Problem of tomorrow will be solved by above practices done by children in schools (Tylor, 2015).

Mumford et al., (2017) identify the nine key leadership skills used by leaders working in organizations which address the problems of leadership. These skills are definition of problems, analyzing, planning, predictions, creative thinking, and evaluation of ideas, understanding and making of sense. The lack of problem solving process creates challenges for students in problem solving. To analyze and establish questions, select and develop solutions and cultivating student abilities context simulation is beneficial which are indicated by the results. Student will be able to analyze the result and apply feedback (Yu, Fan & Lin, 2015).

Germaine et al., (2015) describe 21<sup>st</sup> century skills which are useful in the future of work place. These are critical thinking skills, problem solving skills, communication skills, collaboration skills, innovation skills and creativity. Problem solving skills include systematic thinking, reasoning effectively, making decisions and judgments and then solving of problems. Shared goals can be achieved by collaboration of skills in working with diverse teams, practicing flexibility, effectively working and respect for each other. Leaders from education, business community and policy set these skills essential for students in learning process.

According to (Castro, Kelly, & Shih, 2010) that variety of strategies were utilized by teachers including problem solving, help seeking, seeking renewal and managing difficult relationship. For beginning teachers these strategies assist to build their support and additional support.

Parlar et al., (2017) concluded that students gain problem solving skills, communication skills, responsibility, ability and honesty to set the important goals. Furthermore activities should be performed inside and outside of the classrooms to develop their leadership qualities.

Erozkan & Atilgan, (2013) examined the relationship among problem solving skills, communications skills and social self-efficacy of students. Results showed that problem solving skills and communication skills were found significantly correlated to social self-efficacy. Furthermore problem solving skills and communication skills are the main predictors of social efficacy.

## **2.2 Dimensions of problem solving skills**

The following are the three main dimensions of problem solving skills

1. Problem solving confidence
2. Approach avoiding style
3. Personal control

### **2.2.1 Problem solving confidence**

Ability of someone to solve the problems having confidence on his/her-self when faced a wide range of problems is said to be problem solving confidence (Abdollahi et al., 2015).

The self-confidence taught of students by the model of contextual learning is greater than exploratory way to teach the students. To improve the self-confidence of students an interaction is occur between students and learning models (Surya, Putri & Mukhtar, 2017).

The belief of someone having the ability to solve the problems is called problem solving confidence. The positive effect of metacognitive found on problem solving skills of students and also recommended that metacognitive strategies taught to the students for their academic achievement (Safari & Meskini, 2015).

Yoo & Park (2015) explore the cause based learning group effect on problem solving ability, learning motivation and communication skills of students. Problem solving ability, learning motivation and communication skills show significant and positive effect by cause based learning group than the group of lecture based learning.



Villonez (2019) determine the performance of fourth year students in physics by English achievement and problem solving confidence. The performance level of fourth year students in physics was proficient; the academic achievement level in English was proficient and the problem solving skills level was moderate.

The self-confidence increase non-significantly in the ability of problem solving skills while Scratch platform did not affects any type of problem solving skills and students can use easily scratch platform in programming (Gulbahar & Kalelioglu, 2014).

### **2.2.2 Approach avoiding style**

A degree to approach or avoid when facing problems is said to be approach avoiding style (Abdollahi et al., 2015). Among Social integration and approach found positive relationship and social integration and avoidance shows negative relation (Rubin, Watt & Ramelli, 2012). Abdollahi et al., (2018) analyzed the relationship between problem solving and perceived stress. Perceived stress found more in approach avoidance style in problem solving skills. Ahvan et al., (2016) investigate the correlation between problem solving styles and Gardner's multiple intelligence and the role of achievement level in academic performance of high school level. Verbal linguistic intelligence show significant correlation with approach style and avoidance style found significant correlation with musical, verbal linguistic and bodily-kinesthetic.

Positive association was found in rejection sensitivity with depressive symptoms depression symptoms was negatively associated with positively problem orientation, depressive symptoms were positively associated with avoidance style of social problem solving, impulsive or careless style and negative problem orientation (Kraines & Wells, 2017). Lau et al., (2019) result found that self-efficacy and problem solving ability was significant associated with volunteer motivation. The role of avoidance style and self-efficacy found significant mediators.

### **2.2.3 Personal control**

When facing problems the ability of someone to control his or her behavior and emotions is said to be personal control (Abdollahi et al., 2015). While solving a problem personal control is the management of behavior and feelings (Cansoy & Türkoğlu, 2017). Among problem solving

skills and its component personal control there was a statistically significant difference found and in terms of gender no significant difference was found among students (Safari & Meskini, 2015).

In problem solving inventory there was a greater score found in personal control of those students who belong to urban areas, lower problem solving confidence and approach avoiding style was found in unmarried students compared to married students (Asimopoulos, Martinaki & Maniadaki, 2018). Personal control of problem solving inventory was found at an average level that shows the ability of someone to stay in control in a problematic situation (Ergün & Arslan, 2017). Kocoglu et al., (2018) evaluate the effects of a manager's problem solving training program and their self-reported problem solving skills. Statistically, change was not significant and personal control behavior was improved. Personal control negatively affects the lateral thinking level of pre-service teachers at the faculty of education (Yazgan, 2021). In the total PSI score, personal control of students in a social work group shows a high correlation with regulation of emotion in the dimension of emotional intelligence (Asimopoulos, Martinaki & Papaioannou, 2020).

## **2.3 Problem solving steps**

In our daily life we may face problems at any point. For example, at a holiday we are thinking where to stay or how to organize a surprising birthday party or which route will be helpful for us to reach the city when we have never traveled before then we identify to use the problem solving steps to solve it. Many skills to be used in that explain the problem solving process (Saygili, 2017). According to Yayuk & Husamah (2020) four steps in the problem solving process. Understanding the problem, planning ability, applying the plan and look back.

### **2.3.1 Understanding the problem**

Understanding the problem is a stage where an individual is expected to understand, to determine what are the given, what are asked, what the problem means and present clearly the problem condition (Ersoy & Guner, 2015). Problem solving skills, problem understanding and reading concept of students are still weak and also to difficulties in the concept to determine the right solution. Both skills will be increased through good learning strategies (Irsal, Jupri & Prabawanto, 2017).

### **2.3.2 Planning ability**

Planning ability is one of intellectual behavior of someone to solve the problem. In academic and non-academic problems the planning ability will help teachers and students. Students faced various kind of situations the problem solving ability will facilitate to resolve them. In the work of world students will be ready to participate, plunge and face global competition the problem solving ability is needed. Problem solving ability of students need various types of efforts includes, improving quality of teaching. By the result of that students will gain improvements in problem solving ability faced in community, critical thinking and gaining of information (Yulindar, Setiawan & Liliawati, 2018).

### **2.3.3 Applying the plan**

After collecting information and data students or teachers implement the plan to solve the problem. They are trained to present troubleshoot of problem and implement the plan (Afiyati, Warniasih & Utami, 2020).

By high predicate to obtain the accurate results students are able to solve the problem with systematic and correct way but with low predicate results that students are not able to solve the problem with accuracy that show the unawareness in the previous steps of problem solving (Vilianti, Pratama & Mampouw, 2018).

### **2.3.4 Look back**

It conform the obtained result to the problem and assure that solution for the problem is operated by an accurate way. To know the truth with answer of the problem students have troubles at the looking back step and this caused by the gotten by understanding of problem, planning and applying the plan problem solving inaccurately. Difficulty will not happen in looking back when students will clear about the previous steps of problem solving steps (Nurkaeti, 2018). The completed result is re-recheck, reviewed and also finds the other easier way to reach the solution of the problem in the looking back step of problem solving (Dewi, 2018).

## **2.4 Leadership**

One of the world oldest preoccupations is leadership. Leaders are prophets, kings, chief, models and priests for the people in the new and old testimonies. Leadership is not limited to western literature it goes to Asoka, Confucius, Plato and Aristotle. In the developing of social

sciences significant effort was done to formulate the principles of leadership spread from the study of philosophy and history over the centuries (Bennis, 2020).

Universal attentions attract by leadership. Over centuries social scientists, historians and philosophers have attempted to explain and understand the leadership and they theorized leadership about how individuals lead one another. Experience in our life with leadership is not different from the other cultures experience. In rural and industrialized modern culture of human life leadership is an integral part. In schools, mosques, gyms, church, class groups, corporation and corporation followers suffers under ineffective leaders and prospers under effective leaders. Leadership exists whatever society exists. The fundamental human condition is leadership (Johnson & Hackman, 2018).

Diverse challenges face by the leaders in education in an increasing changing and competitive environment. Strategic, cognitive, business and interpersonal skills required for both man and women in management roles stated that there is positive relationship of transformational leadership with job commitment and job satisfaction in the employee's bank sectors. To become more innovative and creative transformational leaders help workers to adapt the external environment (Kairys, 2018). Bushra et al., (2011).

## **2.5 Leadership Theories**

In the contemporary literature numerous definitions, classification and theories about leadership is exist. With the passage of time several theories in leadership have been modified and refined and none of theory is absolutely irrelevant. A consensus has developed by many practitioners and researchers beliefs that a flexible development process is leadership. The following main theories were developed in 20<sup>th</sup> century (Khan, Nawaz & Khan, 2016).

### **2.5.1 Great-Man theory**

By Thomas Carlyle (1841) developed the concept of Great Man theory in the mid of 19<sup>th</sup> century. A powerful genius, capable of producing comprehensive plans that control enormous complex concerted actions and foresee all contingencies (Mouton, 2019).

Only few selected can achieve greatness which is the main focus of great man theory on heroic individuals (Harrison, 2017). Great Man theory says that the leadership qualities inherited

by birth of leaders as compared to non-leaders. With leadership qualities great leaders were born not developed. Very few are born with leadership qualities show the limitation of Great Man theory (Chow, Salleh & Ismail, 2017).

### **2.5.2 Trait theory**

From Great Man theory, trait theory was developed. However, its approach is evaluating the leaders the trait theory is more systematized. Inherited of leader were not assumed in trait theory but only highlight the characteristics of leaders are different from none-leaders. The primary human attributes inherited were traits. Distinguishing leaders from followers the main focus of trait theory is human characteristics and personality such as social, intellectual and physical traits. No association of good leadership was found with traits. These major leadership traits were found over the centuries of research are self-confidence, intelligence, determination, sociability and integrity (Chow, Salleh & Ismail, 2017).

### **2.5.3 Contingency theory**

According to Luthans and Stewart, “the contingency approach is defined as identifying and developing functional relationships between environmental, management and performance variables”. In 1960 the origin of contingency theory was found in organizational studies and strategic management. In leadership research and organizational behavior contingency theory permeated between the 1960s and 1980s. In leadership and human resource management contingency has been applied (Boeche, 2016).

In the early organizational theory literature the foundation of contingency can be found. Move away from traditional management approaches the early theorists to being one way to structure and manage organization. The best structure of organization can be exit effectively upon the contingent environment. For most organizations they suggest environment-structure-performance relationship. Uncertainty, completion and complexity were the essential environment factors that drew the attention (Williams, Ashill & Naumann, 2017).

### **2.5.4 Servant leadership theory**

Both positive and negative strong feelings evoke with the term servant. Generally the concept of serving others is positive and optimistic but negative connotations associated with terms like passive or indecisive. Normally the idea of servant directly applied to the employee in organization. In organizations the servant take care people of high powered like CEOs and other important people. A lot of associate link servant leadership theory is the leaders in organizations serving the employees of organization. Associated with the positive impact of organization over the past several decades the servant leadership concept has developed as dynamic form of leadership (Heyler & Martin, 2018).

To engage followers in multiple dimensions such as spiritual, emotional, ethical and rational is said to be servant leadership approach, such that what they are capable to becoming they are empowered (Eva et al., 2019).

### **2.5.5 Transformational theory**

Bass (1985) developed transformational leadership theory. In recent decades the transformational leadership is the most published theory in international journals and show continuous work and increase in citations (Northouse, 2013). In the field of psychology to understand the effect of leadership behavior transformational leadership theory represent the most studied paradigm (Álvarez et al., 2016).

This theory empowers followers to improve and develop beyond expectation of performance. When transformational leader convey message to their followers they have clear sense of mission. With the help of leaders the followers can bring change in the betterment of organizational mission. Criticisms come towards transformational leadership theory because the theory is more charismatic than transformational and difficult to train others as transformational leader (Hamad, 2015).

Klaic et al. (2020) discussed that learning and innovation are essential factors in the success of organization such as science in knowledge intensive industries. In scientific teams the key factor for enhancing learning and innovation is transformational leadership. Leaders can enhance learning, innovation, encourage team building, group visions, give emphasize on group identity are engaged by team-centered approach in transformational leadership behaviors.

Additionally, Antonopoulou et al. (2021) state that there has a strong positive correlation of leadership outcome with transformational leadership style and negative correlation with passive to avoid leadership and transformational leadership suggest to employees greater satisfaction and efficiency. In the quality performance for organization transformational leaders play an important role and revealed a strong association among careers developments and leadership (Haider & Riaz, 2010). During market trends, particularly in the era of new industries transformational leadership has significant impact on innovation of organization (Gumuluoglu & Lisev, 2008).

Top et al. (2020) discussed that the concept of leadership is a procedure of motivating or supporting to work with a group of people to achieve the common goal, the leaders lead the workers and employees with the help of strategy to achieve the vision. To set the long term goals and vision leaders encourage the subordinates and leaders have different type of actions such as specific and clear objectives, and clear vision about the future. To inspire and influence the workers leadership is a process to raise the abilities of workers for the success of organization.

Purwanto et al. (2020) discussed that transformational leadership have significant and positive effect on the educational institutions performance. Transformational leadership empowered the idealized power, inspiration, intellectual stimulation and individual judgment of employees. Through participation, support to new ideas and important degree of autonomy and flexibility for take risks it engages workers.

### **2.5.6 Transactional theory**

In 1985 Burns developed the theory of transactional leadership. Transaction of pecuniary and non-pecuniary character is the base of transactional leadership theory. This leadership refers to the behavior in which the followers are rewarded for good performance and high effort or punishment of low or unsatisfactory results. To increase the organizational attainments of goals these incentives are used in employees. Transaction between leaders and employees the conceptual core is transactional leadership with the use of contingent reward and sanctions (Jensen & Andersen, 2016).

## **2.6 Leadership styles**

The broadly discussed topic in the literature is leadership. An activity to guide a group in such a way in order to gain the defined goals is called leadership. There is a great impact of

leadership on organizational outcomes, performance as well as outcomes by the consequences and antecedents (Indrafachrudi, 2006). Researchers, such as Hartog & Belschak, (2012) added in the literature as relating the projecting styles of transformational and transactional leaderships. The interchange of objectives rewards among managers also employees are doing in the transactional leadership. Further, to fulfill requirements transactional leaders encourage employees with rewards (Tajeddini, 2016).

Additionally, the focuses of transformational leadership are the development of followers and also their needs. Managers exercising transformational leadership style for the development of the value system of subordinate namely morality and motivation (Ismail et al., 2015). Moreover, the development among the followers and leaders to improve pure kind of the interest of followers, motivations also the values of transformational leaders perform like a bridge (Top, Abdullah & Faraj, 2020). To achieve the goals of organization, leadership is the combinations of different tasks and transaction behaviours by which people are influenced (Negussie & Demissie, 2013).

Now days there are two types of leadership styles mostly used in schools. The first one is transactional leadership which is task-oriented and the second one is relationship oriented is called transformational leadership. To raise the performance of followers and make the higher productivity in organization leadership plays an important character in the organization (Khan, Mughal, & Khattak, 2017). Performance is result by a good leadership style also with best reward system in the organization and the culture which is develop among the employee and leader create effective result in performance (Saeed & Mughal, 2019).

From the result which is showed that among the group differences inside the leadership styles are the strong medium of the achievement of follower's goals acceptance using different levels of analysis and specially the leaders viewing to sponsor objectives among the supporters might to do over the dynamic use of the transformational leadership style, although whose considering to encourage the enactment objectives might make certain over the dynamic use of a transactional leadership style (Hamstra.et.al 2014).



## 2.7 Transactional leadership

The widely used theory in educational institutions is transactional leadership, it is based on the reward and contingent on performance among student and instructor in these institutions students need good marks or grades after the completion of any project, task, assignment and exam (Khan, 2017).

Significantly predictive leadership style is transactional leadership style (Ozgenel & Karsantik, 2020). Sirin et al., (2018) result show that in organizational cynicism transformational leadership of teachers have higher than transactional leadership style. Ebrahimi et al., (2017) investigated that transactional leadership style moderate the connection of learning orientation of students at school level and transformation of schools female leaders are more effective than male. Jacobcen et al., (2021) check out the positive effect of transactional leadership training on the behavior of transformational leadership. Transactional leadership style is more powerful than transformational leadership style in political scenario and transactional leader follow the rule with regulations and rules (Nawaz, Hussain & Sohail, 2020).

The contingent reward of transactional leadership is highly co-related with the satisfaction of followers also with the leader in the organization (Al-Mansoori & Koc, 2019). Purwanto et al., (2020) agreed that transactional leadership style is helpful in the process of instruction, delegation, participation and consultation related to the performance of workers in their attendance, quality of work, knowledge, attitude and cooperation to solve daily problems. Fatoni, Asbari & Santasu, (2020) study show that transactional leadership has negative effect on employee performance.

Saravo, Netzel & kiesewetter, (2017) research found that for leadership training of graduate leaders transactional leadership is effective in their leadership skills and team work which should be add in the curricula. The relationship between performance of employee and transactional leadership style is mediated by the role of culture in organization (Saeed & Mughal, 2019). Putra et al., (2020), proposed that transactional leadership has significant and positive effect in the process of lecture innovation and this study also planned a model for lecture innovation competency in lectures especially in the region of Indonesia.

Nadeak et al., (2019) analyze that transactional leadership style has significant correlation with the motivation of employee work and training programs and transactional leadership of employee have also remarkable correlation with employee work motivation. Both individually and simultaneously work ethics and transactional leadership have positive and significant effect on the performance of teachers (Herminingsih & Supardi, 2017). Azizah et al., (2020) done a research on the teachers of Islamic university found no significant effect on their satisfaction level. Lamm et al., (2016) examined the impact of transactional leadership on engagement within 39 universities in United States in a national change process were chosen by the National foundation to chief science, technology, engineering and mathematics (STEM). They found that the engagement in change is negatively predicted by transactional leadership style in these institutions.

Both public and private sector organizations were examined the relationship and effect between the organizational commitment and leadership styles among leaders. There is positive and significant relationship with organizational commitment and transactional leadership style in the domains which are continuance commitment, effective commitment and normative commitment (Zainuddin & Asaari, 2020). Ahmad et al., (2019) analyzed organizational commitment and transactional leadership on their impact on compensation to understand the relationship between transactional leadership, organizational commitment and compensation a coworker support was used additionally as a moderator.

Transactional leadership and compensation are the important factors in the effecting of faculty members commitment in higher educational institutions, Masadeh et al., (2015) studied that for all organization both public and private have knowledge sharing process and knowledge management process are considered a major activity. Influencing employees to share knowledge practices and their impact on performance of job also performance of firm are suggested by transactional leadership style. Hands, Hicks & Bahr (2015) confirms that experience stress and role conflict are impact by different types of leadership. Transactional leadership style has no relationship to coping resources and the relation of stress is not associated with leadership style but related with stress role-loaded and role-conflict.

Khalifa & Ayoubi, (2015) explored the role of transactional leadership style of organizational learning both public and private universities. Contingent reward is dimension of

transactional leadership style has a significant impact on organizational learning and there is no significant difference between public and private institutions on organizational learning. Sunarsi et al., (2021) measure the leadership style effect on job satisfaction which was intervened by job perception. Through mediating the job perception there is no significant effect directly or indirectly of transactional leadership style on job satisfaction. Deng (2017) analyzed the leader and followers of leadership behavior in education abroad office and work environment. Education abroad office leader practiced transactional leadership style. The mission statement of office aligned with followers and vision of the leaders.

Prasad & Junni (2016) examine organizational influence of chief executive (CEO) transactional leadership style and moderating effect of organizational dynamism. Organizational innovations were positively influenced by CEO transactional leadership style. Transactional leadership style was investigated as a moderating effect between the relationships of employee performance work life balance. On employee performance there is significant and positive of work life balance, significant and positive moderating effect found in transactional leadership style (Aslam, 2015).

Transactional and transformational leadership styles exit correlation with each other. The competency level of leadership technology is not predicted. Discussing the literature this study contributes the effect of cultural differences in many countries on the preferred leadership styles and technology leadership competency may affect the result. School and transform education cannot argued the characteristics of leadership style as a method (Gencer & Samur, 2016). Influence of transformational and transactional leadership styles were analyzed regarding to the implementation and performance of food safety management system. Both transformational and transactional leadership styles show positive and significant result on implementation performance on food safety management system (Purwanto, Asbari & Santoso, 2019).

Transactional leadership stress getting the job done. There is a great impact on the skills of followers in transactional leadership. In transactional leadership style the leader make all decision of itself with no or little involvement of followers (Kathleen, 2012). It is refers to a number of the framework of leadership to brings a shared advantage after exchange take place between leader and subordinate are the main concentrate of transactional leadership style (Amin., Tatlah & Islam, 2018). To get the compensation for the work order of employ is the main theme of

transactional leadership. Transactional leaders set goals for their subordinates, clarifying the reward and their function are associated with management (Nazim.F, 2016).

On the employees performance there is great effect of transactional leadership. This is reliable that the exchange connection in transactional leadership in which the followers remain likely toward bargain a performance to the head, now situation is procedure of transaction, manager deals an intellectual incentive (promise, respect as well as trust), also actual trophies (Burns & Bass, 2005). There is a satisfactory performance directed to produce in the process of transaction among followers and leaders and that can be interpreted as remuneration or fee (Sundi, 2013).

The key focus of transactional leadership between leader and followers are occurrence of exchanges (Bass 1985; 1990; 2000; 2008; Burns, 1978). The exchanges which allow the leaders for the completing of performance are the objectives, competition of the required tasks, through contractual agreement the motivation of followers, to achieve the established goals by directed behavior of followers, maintaining the current organizational situation and avoid the unnecessary risks; these exchanges allow leaders (McCleskey, 2014).

To accomplish their personal self-interest, reduce anxiety of place of work, also essence on pure organizational aims such as improved value, client service, cheap costs, and increased production are permitted to the followers in transactional leadership (Sadeghi & Pihie, 2012). The followers best interest is occurring in transactional leadership because it is effective and followers are doing what the leader requires (Northouse, 2013). Novitasari et al. (2019) conclude that transformational and transactional leadership styles have significant and positive impact on the lecturer innovation performance.

### **2.7.1. Dimensions of transactional leadership**

In the comparison with transformational leadership, transactional leadership consists of two dimensions or factors.

#### **2.7.1.1 Contingent-Reward**

Contingent reward leadership is established on financial and emotional connections. It clarifies role requirements and reward or praise desired outcomes, the important outcome of

contingent reward endorses that transactional leadership pays to predicting worker job satisfaction (Puni, Mohammed, & Asamoah, 2018). The outcomes from the research demonstrate that the suggested reward structure creates a statistically weighty upsurge in the level of motivation, engagement and learning (Park.et al., 2019).

One of the functions of transactional leadership is contingent reward which is very clear, based on contract level of setting performance criteria, specifying the role clearly also the followers requirements task and the accomplishment of goals as well is offer the rewards for the used effort. (Xenikou, 2017). Emotional and economical changes between leaders and followers are based by the contingent reward style of transactional leadership. Reward or desired outcomes and role requirements are clarified by it (Puni, Mohammed & Asamoah, 2018).

Rather than cognitive, identification contingent reward was much related to effective and mediator for goal orientation. To perceive the culture of goal contingent reward less focuses on innovation and oriented (Xenikou, 2017). When leader emphasized on contingent reward the participants are more willingly to do more and the enjoyment of task is also higher compared to control group (Robinson & Boies, 2016). Participative leadership and contingent reward both enable the joint practice and positive associated. The increase of involuntary turnover and decreased of voluntary turnover was effective found in the style of contingent reward compared to older participant (Buengeler, & Voelpel, 2016). The self-efficacy of teachers was significantly associated with contingent reward of transactional leadership style (Hoxha & Duraku, 2017).

Terek et al., (2015) check the school teacher leadership impact on communication satisfaction. Contingent reward behavior has strongest influence on leadership style, and age and gender was found observed relationship which are the moderating effect of teachers. Contingent reward was found significant positive predictor of organizational citizenship behavior (Atta & Khan, 2015).

### **2.7.1.2 Management by exception**

Williams, Ashill & Naumann, (2017) put forward that management by Exception is the second element of transactional leadership. To inspire followers, provide them a positive vision and challenging current criteria, and a leader working management by expectation watchfully observers performance and modifies the wrongdoings that are occurring in the organization.

Management by expectation active style is the second dimension of transactional leadership and that style the job of the leader is to stay active it means that whenever there is some problem or issues arising in the organization so the leader will quickly solve that, on other hand passive is not like that (Busari, 2011).

When there are some mistakes committed by employees so the manager will intervene and monitors management with exceptions dimension, and the leader role in this element is to escape deviance after the goals, decide plus right the difficult parts (Veysel, 2014). Management by exception have two, the first one is management by exception active in which the work by subordinates monitors by the leader, take corrective actions to avoid mistakes, standards derived from the rules are watched by the leader. In management by exception passive the leader interferes in the process of work at the time when the performances are not met according to the standards and expectation. To achieve the targeted goals confidently the motivation of followers encourage by this type of leader behavior (Mohamad & Yahya, 2016).

Active management by exception based on leader follower instructions in which leader take corrective actions. In passive management by exception leader intervene only there is some problems occur and follower accept responsibility for his or her doings. In transactional leadership style the passive management by exception significantly predicted by four communication styles; verbal aggressiveness, preciseness, impression manipulation and emotionality (Crews, Brouwers & Visagie, 2019). Transactional teachers are rarely displayed passive management by exception in transactional leadership style and teachers need to know the problems of school so the head teacher did not apply indifferent tactic to leadership (Eboka, 2016).

## **2.8 Transformational leadership**

Style of leadership where the leaders have the ability on the way to inspire and motivate team member to achieve organization goals is called transformational leadership. Good leader is a person who performs well and motivates other people and finally achieve organizational goals. In transformational leadership leader style inspire his subordinate in a good manner to obtain organization mission and vision. Some researchers claimed that an organization activity will be going smoothly when the organizations have effective leader and organizational goals and

objectives are easily attained by employees who are committed to organization. In this regard the organization needs well qualified leader to compete other organization (Arif & Akram, 2018).

To increase the consumers awareness of the products transformational leadership play an important role. Internal and external challenge faced by many organizations now days. One of the challenge is competition, on a global scale competition is growing (Al-Hawary & Al-Hamwan, 2017). In developing strategies the availability of leaders capable that enables organization to overcome and lead competition, in a competitive environment the organization help to survive (Al-Hawary & Hadad, 2016). Transformational leadership focus on the involvement of interpersonal dimensions, building trust on each other and resolving conflicts. The behaviour of the leader is demonstrated by these leadership styles (Paulson et.al., 2011).

Overall performance of organization can be improved by the ability of team members when they are working together (Marks et al., 2011). To discover innovative solutions in the prevailing problems transformational leader will challenge his/her companions, to accomplish individual goals and predictable results transformational leader empower them in working and seek to increase the ambitions. In transformational leadership style the leader make the decision with all stakeholders in the organization which will be profitable for both leader and followers (Kathleen & Luft, 2012). According to Sereau (2010), to achieve the organizational goals the focus of transformational leadership style is to improve the self-confidence, intellectual development, team spirit and enthusiasm among followers. Transformative leaders are willing voluntarily to achieve objectives, vision and goals of the organization, among leaders and followers they built admiration, loyalty, respect and trust among followers.

According (Robbins, 2001) to change their life those who are able to inspire their followers and inspire them by a vision and a bigger goal are said to be transformational leaders. It is a kind of leadership method which doesn't use its potential for personal interest but it is a leadership style from which another individual is supported or motivated. Transformational leader use self-knowledge and adopt various kinds of behaviors due to which he or she attain or increase organization performance and achieve its goals. However there are so many theories present about transformational leadership, for the first-time practice transformational leadership in business organizations. Leadership style is called transformational leadership in which the combination of different characters for a leader includes motivation of employees, controls over self-emotional,

deal the situation. This type of approach is the mixture of different characteristics which is gathers elements from many methods. In transformational leadership all employees feel respect and give devotion to the group as well as to the leader. Performance of employees is increase from expected performance. Transformational leader can gain high performance through his or her behavior with employees (Yan, Li & Bin, 2015).

A leader inspires the followers in the transformational leadership style and followers follow their leader. A clear vision and passion should be in the leader. There is communication among leader and followers. Among leader and followers there is a close relationship. All the process of transformational leadership depends mostly on the talent, skills and knowledge share by employee for gaining of organizational goals and objectives. All the achievement of the transformational leadership organization depends on the leader vision. Among the followers the promotion process is very important. If there are flaws so there must be integrity in transformational leader, so the impression will go bad on the followers. The trust of follower on the leader based on the vision and integrity (Nazim & Mahmood, 2016).

Bucic et al. (2010) explore the effect of the leadership style inside the groups of learning teams in organizations. The result proposes that the transformational leadership style was experienced by the leader of a team has an important outcome on the learning's progress as a planned approach inside the teams of organization. Transformation leadership has a significant role in the different areas of organizational studies. Different researchers have conducted a multi variable based comparative study of leadership styles in Pakistani universities and have raised the issue of autocratic and commanding leadership style (Senge, 1990).

Another article has also raised the issue of leadership challenges in the higher education sector of Pakistan (Pakistan Today, 2014). Mittal and Dhar (2015) studied the role of heads transformational leadership style, creativity, knowledge sharing and employee creative self-efficacy (CSE). Therefore, the previous studies were accomplished by Bucic et al., (2010). Mittal and Dhar (2015) shown that the transformational leadership style's determination can raise the level of employee ability is undeniable and many studies have established that actual leadership style leading to support the developments of organizational learning, improving the individual's creativeness and individual development as well as foster the individual employee's positive approach on the way to their job.



Masa'deh et al. (2014) studied transformational leadership style that effect workers' understanding practice sharing, also see the effect that on firm performance and job performance.

Khan et al., (2014) find out three types/styles of leadership styles transformational, transactional and laissez-faire leadership styles, and the styles of leadership with different leaders of several organizations in Pakistan and observed their influences on organizational performance. Transformational leader is a pledge who together employees and take work. Employee's oriented organizations are those organizations who work for the development and consideration of their employees (Aleksei et al., 2018). Likewise, transformational leadership these study outcomes are maintained in the outcomes of research professionals. Walumbwa et al. (2004) the influence of transformational leadership on performance is positive, commitment and job satisfaction.

Ozaralli (2003) Demonstrate guess that transformational leadership effect on follower authorization. Team feels authorization in the presence of transformational leadership. When the teams are active so there will be more practices occurring. Transformational leadership facilitate employee for more production of the organization is identifies in various countries globally are the result of their applications (Boehnke & Bontis, 2003). The motivation of follower allows them for great achievement and maintains the environment smoothly in the organization by transformational leadership (Langbert & Friedman, 2003). Sparks & Schenk (2001) stated with the help of transformational leadership they can truly convert subordinates by motivating them to find out the greater purpose in the culture of work and also motivate them to achieve the best possible performance.

Gonzalez et al. (2017) explore the intervening effect among organizational performance and transformational leadership. In organizations with innovation, learning and human resource management practices are developed by the association between transformational leadership and organizational performance. On the creative process engagement transformational leadership have a significant impact on employees. By providing a conducive environment in organization transformational leaders boost the creativity of workers, provide the basic autonomy and flexibility (Mahmood et al., 2019). Andriani, Kesumawati & Kristiawan, (2018) finds the relationship between transformational leadership, teacher's performance and work motivation. There is a positive effect on teacher's performance by work motivation and transformational leadership.

There is a positive predictor of burnout on obsessive passion while transformational teaching and harmonious passion were negative predictive of burnout (Castillo et al., 2017). Not only inside educational institutions but also in psychology, business and public management transformational leadership concentrate on the main three variables which are the qualities of leader, leader colleagues characteristics and organizational features (Sun, Chen & Zhang, 2017). Principals and teachers should be aware about transformational leadership style. The principal of a school provide the atmosphere of trustful, caring, involvement of teacher in the process of planning, team spirit and making materials for teachers (Money, 2017).

Transformational leadership and job satisfaction are positively related with each other. When principal of the school act as a transformational leader so the teachers of the school will be substantial satisfied (Kouni, Koutsoukos & Panta, 2018). Problem solving, alternative methods to use social and human capitals, system and development of fresh knowledge, important for the policy and political resource management, develop economic system universally are the result of global leadership (Lewis, Boston & Peterson, 2017). Allen, Grigsby & Petters, (2015) find the relationship between school climate and transformational leadership. In this study the researchers found a positive relationship among transformational leadership and school climate, and there is no relationship between school climate and students achievements nor transformational leadership and students achievements.

Leadership in school facing a lots of challenges. The principal transformational leadership style is a key when confronting these challenges. Transformational leadership had a positive effect on school climate, working and learning environment, teacher guidance, staff members, teachers, parents, students and society (Pepper & Thomas, 2001). Wang (2019), suggest that transformational leadership is the important factor for developing students modernity, school climate, affiliation climate, justice climate and establishment of innovation, In the sub-scales of transactional leadership, transformational leadership, planning and effectiveness there is a significant difference among these factors. The results also show that transformational leadership is significantly to transactional leadership and transformational leadership is significantly related to leadership outcomes and school culture (Antoniou & Gioumouki, 2018).

Idealized influence, intellectual stimulation, inspirational motivation, individualized consideration, management by expectation had important positively association with both

employee job performance and employee job satisfaction. Management by expectation have positively effect on employee job performance and employee job satisfaction. Contingent reward has no positive effect on employee job satisfaction and weakly effect on employee job performance (Torlak & Kuzey, 2019). On the job performance of teacher's instructional leadership had significant and positive effect on it (Namutebi, 2019). Amin et al., (2016) finds that transformational leadership dimensions was positively and significantly associated with project team performance.

Amin et al., (2018) advocate that the more experienced style of leadership is transformational leadership style than transactional and laissez-faire and their dimensions inspirational motivation, idealized influence and management by exception also plays a vital role in development of leadership style of a leader. Iqbal et al., (2019) suggest for the developing country like Pakistan that transformational leadership style can be more effective for the success of any project and it can improve the effectiveness and efficiency for the success of the project. Ongoing project can be successful by the behavior of managers to use transformational leadership style. In developing country like Bangladesh the principals of schools following 15 percent transformational leadership style, 46 percent practicing transactional leadership style and 39 percent following laissez-faire leadership style (Hossain & Mozumder, 2019).

Dimensions of school climate and transformational leadership factors exits positive relationship and reading achievement of student transformational leadership factor inspirational motivation found significant (Allen, 2015). Transformational leadership style empower team member to increase their skills and motivation and it is more influential style of leadership to the success of project and job satisfaction of the followers (Poyraz, 2021). Between a successful project and transformational leadership effective communication play a mediating role (Ali, 2021). Transformational leadership style increase the role of teachers in their performance and by indirect effect of transformational leadership on organizational citizenship behavior is expressing (Arar & Nasra, 2019).According to Martin (2015), among directors, academic library deans and Liberians of university to see the differences on the bases of experience, gender and age of male and female leaders there is no difference found leaders but idealized attributes and inspirational motivation were more likely used by women. In the field of higher education researchers have increase their attention on creativity and leadership, simultaneously these topics are rare to

investigate empirically. Transformational leadership of professors have positive predicted on the perception of students and rate their creativity above and beyond in the perceptions of students on their professors (Zacher & Jonshon, 2015). Wahab et al., (2016) examined academic leader leadership styles at university level. In most academic leaders transformational leadership style was found highly practiced. Knowledge sharing was supported among educators in transformational leadership style.

## **2.8.1 Dimensions of transformational leadership style**

### **2.8.1.1 Idealized influence (II)**

Idealized influence is also called charisma, in this dimension the leaders are behaving as the role models for their subordinates. The extraordinary competency, determination and persistence and also the high standards of moral and ethical conduct of the leaders are usually perceived by the followers. The leaders are deeply admire, respect and trust by them under such leadership the followers having a vision and a sense of mission and want to imitate them (Liu.P, 2018).

Idealized influence is the ability of charismatic leader who focus on significant of mission and beliefs. The followers show full respect to their leaders and leader is a role model, trusted, respected and admired. The leader share risks with followers, consistent, accept the requirement of followers like his or her own and behave ethically (Chan et al., 2019). To provide resources and support the followers will respect and trust on the leader. Difficulty and complexity related to the followers the leader provides directives and as a result the followers will be willing to accept it (Orabi, 2016).

### **2.8.1.2 Inspirational motivation (IM)**

To communicate with high performance expectations the inspirational motivation entails leaders in an encouraging and enthusiastic fashion. Inspirational motivation involves the supportive behaviors which are optimistic about their future and make vision among employees in the organization (Anderson, 2017). Budur & Poturak, (2020) hereafter, sketching and considering the clear direction of followers for their future directions which are the result of their motivational effect. Inspirational motivation is a process contains the encouragement of followers to attach the personal goals with the organization goals.

Organizational objectives can be achieved when the implications of outcomes will be a beneficiary for both organization and employee (Orabi, 2016). To build satisfaction and trust with employee inspirational motivation play an important role. Organization success can be facilitated by sharing of knowledge which is the important component of inspirational motivation (Rawung, Wuryaningrat and Elvinita, 2015).

### **2.8.1.3 Intellectual stimulation (IS)**

An intellectual stimulation the leaders are able to provide an environment for followers to motivate, think and be creative (Fauji & Maulani, 2013). By giving them enough freedom to make creatively overcome, the leader will challenge assumptions, and solicits follower's ideas accordingly (Steven, 2007). In this dimension the leader give freedom, safe environment to bring the creative ideas in the organization (Nahuib & Naem, 2015).

To create a supportive organizational environment individual creativity is promoted by intellectual stimulation. Intellectual stimulation effort promotes the followers to be creative, to approach old problem with the latest way, reframing problems and question assumptions. Without the horror of negative interpersonal concerns from leaders the followers openly out of the box, create new ideas to solve the problems, challenge their own beliefs and tradition and apply exploratory thinking process (Çekmecelioğlua & Özbağ, 2016).

### **2.8.1.4 Individualized consideration (IC)**

From the previous two decades result show that transformational leadership have indirect effects. A series of dyadic interactions transformational leadership is arbitrated by the time like leader member exchange, interaction among leaders and members and shaping the self-concept of followers, are examines individual subordinates and argued in the first group (Rusi, Alexander & Henderson, 2017). The organizational practices and formalized executive practices that support the conducts of leaders whose are makeover leaning and here do not transformational leadership, are examined in the second group, it can make significant assistances over leveraging necessary organizational environments, these contain fostering a developmental culture, clarifying an organization's goals, developing internal communication, elevating public service motivation and gaining the political support (Moynihan, Pandey & Wright 2014).

Individualized consideration means treating subordinates as individuals and as a whole person, not just employee or member of the group. In this the leader give chance to every member to succeed, learn and leader act as mentor and coach by delegating tasks to his or her subordinates. Leader provides opportunities, encouragement and autonomy to his/her followers to achieve high level of performance in organization (Weib and Süb, 2016). Cahyono et al., (2020) found a positive and significant effect of individualized consideration of transformational leadership as a mediation of job satisfaction on organizational commitment.

## **CHAPTER 3**

### **METHODOLOGY AND PROCEDURE**

The major purpose of the study was to analyse the problem solving skills among head teachers with transactional or transformational leadership styles at primary school level. The following was the given methodologies and procedures used for the study. This chapter explains methodology used in the research. Furthermore, this chapter explains the research design, population of the study, Sample and sampling techniques, Variables of the study, tools of the research, demographic variable Performa, pilot testing, reliability of research tool, data collection and analysis of data.

#### **3.1 Research design**

According to Busch (2009), the research design defines the nature of the problem addressed in the project. A research design is a plan, structure and procedure through which the objectives are attained. The design of the research used in this study was descriptive and quantitative research approach was applied by the researcher in current study. Objectives of the study were as under: i, To assess the problem solving skills of head-teachers at primary school level. ii, To find out the transactional or transformational leadership style of head-teachers at primary school level. iii, To analyze the relationship of problem solving skills among head-teachers with transactional or transformational leadership style at primary school level. Two questions were developed in the study for objective 1 & 2. (i) What type of problems solving skills do you follow when you face as a head? (ii) Which leadership style (Transactional/Transformational) mostly do you used to solve your subordinates problem? Moreover one main hypothesis was drawn for objective three. (i)There is no significant relationship among problem solving skills, transactional leadership style or transformational leadership style of head teachers.

#### **3.2 Population**

The population of the study was consist on head teachers of primary schools from public sector both urban and rural areas of Islamabad registered and affiliated with Federal Board Intermediate and Secondary Education Islamabad.

Table 3.1

*Detail of population*

<b>Gender</b>	<b>Total Population</b>
Male	80
Female	130
Total	210

### 3.3 Sample and sampling technique

In district Islamabad total numbers of primary schools in public sector consist of 256. The researcher conducted research on the five sectors Barah-Kuh, Urban-II, Nilore, Tarnol & Sehala. The total numbers of primary schools in all five sectors are 256 which consist of 130 girls and 80 boys schools. Therefore, due less number of head teachers the researcher used census sampling in the study.

Table 3.2

*Calculated sample size, rate of return and rate of sample size*

<b>Gender</b>	<b>Total Population</b>	<b>Rate of return (Rate of responses %)</b>
Male	80	76
Female	130	124
Total	210	200(95%)

The total population of research was 210. Census sampling techniques was by the researcher distributed questionnaires among all population. Male respondents were 80 and female were 130. The return rate was 200(95%) includes male 76 and female were 124.



### **3.4 Tools of the research**

To measure the views of respondents, there is need for researcher to select the standardized questionnaire, in order to get accurate results and applicable for the current research. The researcher used Problem Solving Inventory (PSI) developed by Heppner and Punchy (1982). For transactional and transformational leadership style the researcher used Dr. Jiban Khadka (2020) as a research tool to collect information from the respondents.

#### **3.4.1 Translation of Instruments**

The study consists of two instruments. Problem solving inventory (PSI) was already in English not translated into Urdu because of easy and understandable language for head teachers. The leadership style questionnaire was translated from Nepali Language into English language and the translated version was also checked by author.

#### **3.4.2 Demographic variable Performa**

To collect information relating to the demographic variables of the study the researcher developed and added demographic variable information Performa (DVIP). The following demographic information of respondents consisted in the Performa.

- Gender
- School name
- Work experience
- Age limit
- Professional qualification

### **3.5 Pilot testing**

Through pilot testing the reliability of research was calculated. The researcher ensured in the pilot study that the participants were able to understand the statements. Those statements which are not understandable by the respondents were identified in pilot study and ensured the clarity according to the research procedure. For pilot testing the researcher distributed 50 questionnaires among Head-Teachers of primary schools and return rate was 46 from the total population of 256 head teachers.

### 3.5.1 Reliability of research tool

The reliability of research tool was tested through Cronbach's Alpha Reliability test. The purpose of reliability was to check the constancy of response collected as a result of research tool.

Table No. 3.3

*Alpha Reliability Coefficient of Problem Solving Skills (PSS) Scale*

Subscale	No of items	Alpha Coefficient
Problem Solving Confidence	11	.694
Approach Avoiding Style	16	.819
Personal Control	5	.482
Total	32	.699

Table 3.3 describes Alpha reliability coefficient of PSS. Alpha value of total scale was .699. The result showed significant alpha coefficient for all subscales of PSS. The subscales reliability coefficients value range from .482 to .819.

Table No. 3.4

*Alpha Reliability Coefficient of Transformational Leadership (TL) Scale*

Subscale	N	Alpha Coefficient
Idealized Influence	8	.859
Inspirational Motivation	4	.832
Intellectual Stimulation	4	.788
Individualized Consideration	4	.858
Total	20	.925

Table 3.4 describes Alpha reliability coefficient of Transformational Leadership. Alpha value of total scale was .925. The result showed significant alpha coefficient for all subscales of PSS. The subscales reliability coefficients value range from .788 to .859.

Table No. 3.5

*Alpha Reliability Coefficient of Transactional Leadership (TL) Scale*

Subscale	N	Alpha Coefficient
Contingent Reward	8	.051
Management by Exception	4	.790
Total	12	.212

Table 3.5 describes Alpha reliability coefficient of Transactional Leadership style. Alpha value of total scale was .212. The reliability coefficient value of contingent reward is .051 which is not significant but in the main study this value is increased by .894 due to modification of items and respondents. The subscales reliability coefficients value range from .051 to .790.

Table No. 3.6

*Inter-Scale Correlation of Problem Solving Skills (PSS) Scale*

Problem-solving Confidence	Approach avoiding style	Personal control
Problem-Solving Confidence	1	
Approach Avoiding Style	.232	1
Personal Control	-.131	-.300
Total	.597	.841

Table 3.6 describe inter scale correlation of PSS against the total scale and the result indicate positive correlation among each sub scales and the total scales of PSS except the personal

control. The inter scale correlation ranges from -.300 to .232. The highest correlation exists between problem solving confidence and Approach avoiding style.

Table No. 3.7

*Inter-Scale Correlation of Transformational Leadership Scale*

	Idealized Influence	Inspirational Motivation	Intellectual Stimulation	Individualized Consideration
Idealized Influence	1			
Inspirational Motivation	.615	1		
Intellectual Stimulation	.556	.545	1	
Individualized Consideration	.689	.421	.592	1
Total	.908	.770	.787	.814

Table 3.7 describe inter scale correlation of Transformational leadership against the total scale and the result indicate positive correlation among each sub scale and the total scales of transformational leadership. The inter scale correlation ranges from .421 to .689. The highest correlation exists between Inspirational Motivation and Individualized Consideration.

Table No. 3.8

*Inter-Scale Correlation of Transformational Leadership Scale*

	Contingent Reward	Management by Exception
Contingent Reward	1	
Management by Exception	.002	1
Total	.852	.524

Table 3.8 describe inter scale correlation of Transactional Leadership against the total scale and the result indicate positive correlation among each sub scales and the total scales of

transactional leadership. The inter scale correlation ranges from .1 to .002. The highest correlation exists between contingent reward and management by exception.

Table No. 3.9

*Item-Total Correlation (N=46)*

Item No	Correlation	Item No	Correlation	Item No	Correlation	Item No	Correlation
Item 1	.344	Item17	.245	Item 33	.252	Item 49	.435
Item 2	.196	Item 18	.482	Item 34	.320	Item 50	.429
Item 3	-.386	Item 19	.435	Item 35	.434	Item51	.432
Item 4	.259	Item 20	.267	Item 36	.364	Item 52	.316
Item 5	.436	Item 21	.204	Item 37	.270	Item53	.283
Item 6	.018	Item 22	.439	Item 38	.318	Item 54	-.043
Item 7	.402	Item 23	.240	Item 39	.404	Item55	.240
Item 8	.351	Item 24	.158	Item 40	.373	Item 56	.191
Item 9	.173	Item 25	.350	Item 41	.512	Item57	.512
Item 10	.261	Item 26	.293	Item 42	.282	Item 58	.432
Item 11	.232	Item 27	.230	Item 43	.409	Item59	.466
Item 12	.259	Item 28	-.153	Item 44	.400	Item 60	.355
Item 13	.084	Item 29	-.012	Item 45	.442	Item61	.181
Item 14	.349	Item 30	-.143	Item 46	.444	Item 62	.355
Item 15	.347	Item 31	-.155	Item 47	.600		.
Item 16	.328	Item 32	-.087	Item 48	.471		.

The above table 3.9 is showing the results of item total correlation The values are ranging from -.386 to .600. The overall reliability was .723.

### 3.6 Data collection

From both male and female Head-Teachers of all five sectors Bara-kuh, Nilore, Urban-II, Tarnol and Sehala the researcher collected data for the current study. The permission letter from Federal Directorate of Education Islamabad see appendix....was shown to the Head-Teachers. With the coordination of Areas Education Officers (AEOs) the researcher visited the schools. The researcher distributed 210 questionnaires among head teachers of public schools in primary level and 200 questionnaires were returned back. The data was collected on both ways the researcher visited schools personally and Google form was also used.

### 3.7 Data Analysis

The researcher used the Statistical Package for the Social Sciences (SPSS) to analyse the data and statistical tests (mean & correlation) were used.

Table No 3.10

*Objectives, Hypothesis, Research Questions and Statistical tests*

<b>Objectives</b>	<b>Research Questions/Hypothesis</b>	<b>Statistical tests</b>
To assess the problem Solving skills of head-teachers at primary school level.	What type of problems solving skills do you follow when you face as a head?	Mean & percentage
To find out the transactional or transformational Leadership style of head-teachers at primary school level.	Which leadership style (Transactional/Transformational) mostly do you use to solve your subordinates problem?	Mean & percentage
To analyze the relationship of problem solving Skills among head-teachers with Transactional or transformational Leadership style at primary school level.	There is no significant relationship among problem solving skills, transactional leadership style or transformational leadership style of head teachers.	Correlation

## **CHAPTER 4**

### **DATA ANALYSIS AND INTERPRETATION**

#### **4.1 Analysis and Interpretation of Data**

The present chapter includes analysis and interpretation of collected data having four important sections; section one described the demographics variables and descriptive statistics of the present study. Sections two discussed result of the questions of problem solving skills, transformational and transactional leadership styles at primary school level and section three discussed the results of null hypothesis. In order to find out answer of questions mean and percentage were applied to assess the problem solving skills, transformational and transactional leadership styles of head teachers at primary school level. Furthermore the researcher used Pearson's correlation to analyse the problem solving skills with transformational and transactional leadership styles of head teachers at primary school level.

#### **4.2 Summary of the Data Analysis**

From the targeted area the researcher collected information through problem solving inventory (PSI) and leadership style questionnaire. In the following dissimilar section the data was presented and analysed.

##### **Section I Demographic Characteristics**

Information related to demographic features of Head Teachers is presented in section I. The information related to gender, work experience, age limit and professional qualification of respondents.

##### **Section II Problem Solving Skills at Primary School Level**

Objective no 1 related to problem solving skills has been addressed in this section. Different types of problem solving skills of Head Teachers were discussed in section II.

##### **Section III Transformational or Transactional Leadership Style at Primary School Level**

Objective no 2 related to transformational or transactional leadership style has been addressed in section III.

#### **Section IV Relationship between Problem Solving Skills with Transformational or Transactional Leadership Style at Primary School Level**

This section IV analysed the problem solving skills and transformational or transactional leadership styles of Head Teachers.



## Section I

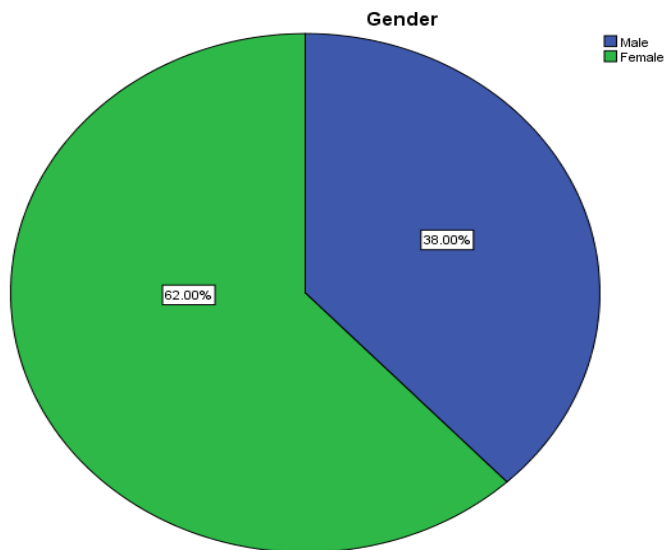
### Demographic Characteristics

Table 4.1

*Gender-Wise demographics (N=200)*

Sr. No	Gender	F	%
1	Male	76	38
2	Female	124	62
	Total	200	100

Table 4.1 showed gender wise division of the respondents. The study included 76 (38%) male head teachers and 124 (62%) female head teachers. As a result, the majority of head teachers were female. There were 200 total respondents.



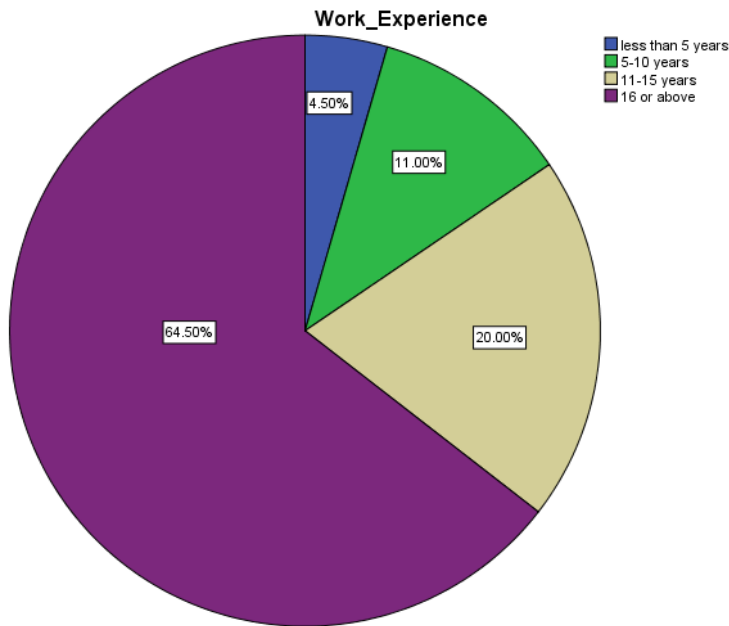
*Fig: 4.1 Gender Wise demographics*

Table 4.2

*Experience-Wise demographics (N=200)*

Sr. No	Experience	F	%
1	Less than 5 years	9	4.5
2	5-10 years	22	11
3	11-15 years	40	20
4	16 or above	129	64.5
	Total	200	100

Table 4.2 revealed experience wise division of the respondents. There were 9 (4.5%) Head Teachers having less than 5 years of experience, 22 (11%) of Head Teachers having 5-10 years of experience, 40 (20%) having 11-15 years of experience and 129 (64%) of Head Teachers having 16 or above years of experience participated in the study.



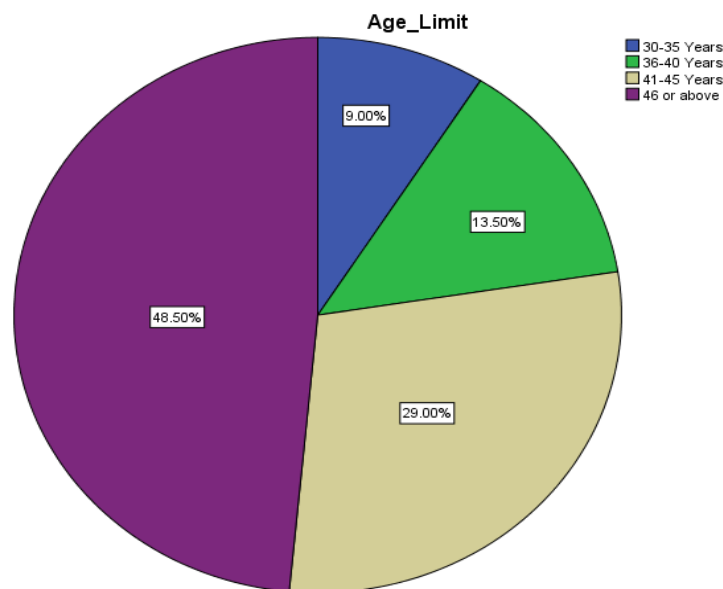
*Fig: 4.2 Experience Wise demographics*

Table 4.3

*Age-Wise demographics (N=200)*

Sr. No	Age	F	%
1	30-35 years	18	9
2	36-40 years	27	13.5
3	41-45 years	58	29
4	46 or above	97	48.5
	Total	200	100

Table 4.3 showed age wise division of the respondents. There were 18 (38%) of Head Teachers were from 30-35 years old, 27 (13.5%) Head Teachers 36-40 years old, 58 (29%) Head Teachers 41-45 years old and 97 (48.5%) Head Teachers were 40 or above years old of age participated in the study.



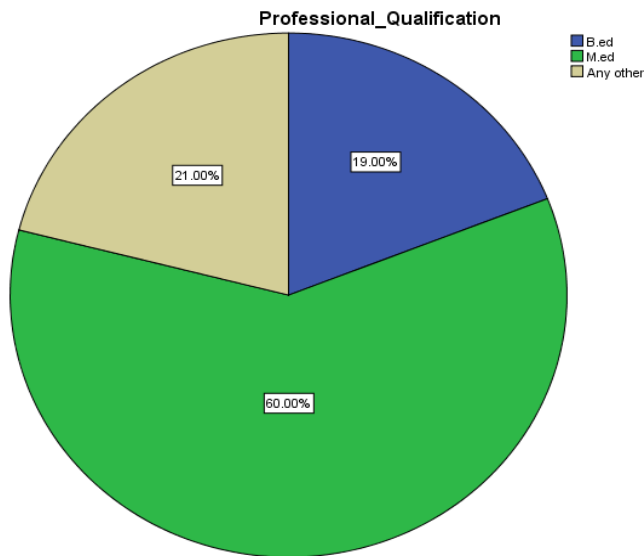
*Fig: 4.3 Age Wise demographics*

Table 4.4

*Professional Qualification-Wise demographics (N=200)*

Sr. No	Professional Qualification	F	%
1	B.Ed	38	19
2	M.Ed	120	60
3	Any Other	42	21
	Total	200	100

Table 4.4 showed professional qualification wise division of the respondents. There were 38 (19%) of Head Teachers were from B.ed, 120 (60%) Head Teachers M.ed, 58 (29%) Head Teachers having other than these degrees participated in the study.



*Fig: 4.4 Professional Qualification wise demographics*

## Section II Problem Solving Skills at Primary School Level

Objective 1: To assess the problem solving skills of head-teachers at primary school level

Table 4.5

*Assess Problem Solving Confidence (PSC) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
PSC1	1(1%)	2(1%)	14(7%)	111(55%)	71(35%)	4.2
PSC2	0%	4(2%)	22(11%)	140(70%)	34(17%)	4.0
PSC3	14(7%)	38(19%)	52(26%)	82(41%)	14(7%)	3.2
PSC4	0%	5(2.5%)	25(12.5%)	127(63.5%)	43(21.5%)	4.0
PSC5	0%	1(5%)	26(13%)	130(65%)	43(21.5%)	4.0
PSC6	0%	1(.5%)	14(7%)	128(64%)	57(28.5%)	4.2
PSC7	0%	2(1%)	22(11%)	134(67%)	42(21%)	4.0
PSC8	0%	3(1.5%)	20(10%)	96(48%)	81(40%)	4.2
PSC9	0%	3(1.5%)	51(25%)	128(64%)	18(9%)	4.0
PSC10	0%	2(1%)	23(11.5%)	137(68.5%)	38(19%)	4.0
PSC11	0%	0%	17(8.5%)	108(54%)	75(37.5%)	4.2
Over all mean						4.00

Result showed that 1% of head teachers were disagreed whereas 55% of head teachers agreed with problem solving confidence. The mean value 4.2 showed that majority of head teachers were agreed that they found creative and effective alternatives solutions to the problem as shown in table no (4.5). Furthermore result showed that 2% of head teachers were disagreed while 70% of head teachers were agreed with problem solving confidence. The mean value 4.0 showed that majority of head teachers has ability to solve many problems if there is no solution initially, as shown in table 4.5.

Result showed that 19% of head teachers were disagreed while 41% of head teachers were agreed with problem solving confidence. The mean score 3.2 result showed that majority of head teachers were agreed that problems they faced are more complex for them. Result showed that 2.5% of head teachers were disagreed and 63.5% of head teachers agreed with problem solving confidence. The mean score 4.0 revealed that mostly head teachers were agreed that they feel happy while solving a problem as shown in table (4.5).

Result showed that 5% of head teachers were disagreed while 65% of head teachers agreed with problem solving confidence. The mean value 4.0 indicated that majority of head teachers were agreed that they make a plan when solving problems as shown in table (4.5). The mean value 4.2 result showed that 5% of head teachers were disagreed whereas 64% of head teachers were agreed with problem solving confidence. Majority of head teachers were agreed and believed that having effort and time is necessary for them to solve a problem as shown in table (4.5).

Result showed that 1% of head teachers were disagreed while 67% of head teachers agreed with problem solving confidence. In table (4.5) the mean value 4.0 showed that mostly head teachers were agreed that they have confidence to handle when problems arise with a new situation. Furthermore the mean score 4.2 in table (4.5) result showed that 1.5% of head teachers were disagreed however 48% of head teachers were agreed with problem solving confidence. Majority of head teachers have the ability and trust on her/him-self to solve difficult and new problems.

Result showed that 1.5% of head teachers were disagreed while 64% of head teachers agreed with problem solving confidence. The mean score 4.0 showed that majority of head teachers were agreed that after the decision they make the actual result was mostly related to what they predicted as shown in table (4.5). Furthermore the mean value 4.0 in table (4.5) revealed that 1% of head teachers were disagreed while 68.5% of head teachers were agreed with problem solving confidence. Mostly head teachers were agreed to handle the situation when they face with a problem.

Result showed that 8.5% of head teachers were not sure whereas 54% of head teachers agreed with problem solving confidence. Majority of head teachers were agreed that at the first stage they try to find out the actual problem. In table (4.5) the mean value was 4.2.

Overall the mean score of problem solving confidence was 4.00 which showed that head teachers having confidence, trust, using effective and creative ways while solving problems to control the situations.

Table 4.6

*Assess Approach Avoiding Style (AAS) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
AAS1	14(7%)	71(35%)	62(31%)	45(31%)	8(4%)	2.8
AAS2	0%	6(3%)	27(13.5%)	141(70.5%)	26(13%)	4.0
AAS3	6(3%)	62(31%)	59(29.5%)	55(27.5%)	18(9%)	3.0
AAS4	2(1%)	3(1.5%)	20(10%)	121(60%)	54(27%)	4.1
AAS5	0%	13(5%)	24(12%)	126(63%)	37(18.5%)	4.0
AAS6	2(1%)	4(2%)	13(6.5%)	101(50.5%)	80(40%)	4.2
AAS7	0%	6(3%)	25(12.5%)	137(68.5%)	32(16%)	4.0
AAS8	0%	4(2%)	33(15.5%)	125(62.5%)	38(19%)	4.0
AAS9	0%	13(6.5%)	31(15.5%)	119(59.5%)	37(18.5%)	4.0
AAS10	4(2%)	37(18.5%)	68(34%)	72(36%)	19(9.5%)	3.3
AAS11	0%	8(4%)	19(9.5%)	140(70%)	32(16.5%)	4.0
AAS12	0%	11(5.5%)	42(21%)	122(61%)	24(12%)	4.0
AAS13	4(2%)	47(23.5%)	78(39%)	56(28%)	15(7.5%)	3.1
AAS14	0%	15(7.5%)	8(19%)	112(56%)	34(17%)	4.0
AAS15	4(2%)	28(14%)	47(23.5%)	92(46%)	29(14.5%)	3.5
AAS16	0%	0%	26(13%)	145(72%)	29(14.5%)	4.0
Over all mean						4.0

Result showed that 31% of head teachers were agreed whereas 35% of head teachers disagreed with approach avoiding style. The mean value 2.8 showed that majority of head teachers were disagreed when they failed a problem, after the solution they don't examine the consequences of the problem as shown in table (4.6). Furthermore the mean score 3.9 result revealed that 3% of head teachers were disagreed while 70% of head teachers agreed with approach avoiding style. Majority of head teachers were agreed that the first thing they do to solve the problem when they confronted. In table no (4.6) the mean value was 4.0.

Result revealed that 31% of head teachers were disagreed whereas 27.5% of head teachers were agreed with approach avoiding style. The mean score 3.0 as shown in table (4.6) showed that majority of head teachers were disagreed to consider the solution of a problem and don't take time to assess the potential success of every alternatives. Moreover result showed that 10% of head teachers were disagreed while 60% of head teachers were agreed with approach avoiding style. The mean value was 4.1 showed that mostly head teachers were agreed when they faced to a problem the first thing they do to think and solve it as shown in table (4.6).

Result showed that 5% of head teachers were disagreed however 63% of head teachers were agreed with approach avoiding style. In table no (4.6) the mean value 3.5 showed that majority of head teachers were agreed that they follow a sequence of actions and compare the original result with the one they expected. Furthermore the mean score was 4.2 in table no (4.6) result showed that 2% of head teachers disagreed whereas 50.5% of head teachers agreed with approach avoiding style. Majority of head teachers were agreed that they think about many possible ways to solve the problem.

Result showed that 3% of head teachers were disagreed although 68.5% of head teachers agreed with approach avoiding style. The mean value was 4.0 in table no (4.6) showed that mostly head teachers were agreed that they examine their feelings to find out the situation going during the problem. In addition result showed that 2% of head teachers were disagreed while 62.5% of head teachers agreed with approach avoiding style. Majority of head teachers were agreed to consider the solution of a problem and take time to assess the potential success of every alternative. In table (4.6) the mean value was 4.0.



Result revealed that 6.5% of head teachers were disagreed whereas 59.5% of head teachers were agreed with approach avoiding style. The mean score was 4.0 in table no (4.6) revealed that majority of head teachers were agreed when they confronted to a problem they stop and think about the problem before to choose the next phase. Furthermore the mean value was 3.2 in table no (3.6) result showed that 18.5% of head teachers were disagreed while 36% of head teachers were agreed with approach avoiding style. In table no (4.6) the mean value was 3.2 showed that mostly head teachers were agreed to generate the idea comes in their mind when solving a problem.

Result showed that 5.5% of head teachers were disagreed whereas 70% of head teachers were agreed with approach avoiding style. In table (4.6) the mean value was 4.0 which showed that majority of head teachers were agreed that they relate the alternatives and assess the consequences with each other. Furthermore result showed that 6.5% of head teachers were disagreed whereas 61% of head teachers were agreed with approach avoiding style. In table no (4.6) the mean value was 3 showed that majority of head teachers were agreed that they try to predict the outcome of a course of action particularly.

Result showed that 23.5% of head teachers disagreed while 28% of head teachers were agreed with approach avoiding style. In table (4.6) the mean value was 3.1 revealed that majority of head teachers were not sure when they try to think the possible solutions of a problem and don't come with many alternatives. Furthermore result showed that 7.5% of head teachers were disagreed however 56% of head teachers were agreed and with approach avoiding style. The mean value was 4.0 in table no (4.6) showed that mostly head teachers were agreed that they used the systematic approach to match alternatives then make a decision.

Result showed that 14% of head teachers were disagreed but 46% of head teachers were agreed with approach avoiding style. In table no (4.6) the mean value was 3.5 which showed that mostly head teachers were agreed to seldomly assess the external forces that might be helpful in the problem. Moreover result showed that 13% of head teachers were not sure while 72% of head teachers were agreed with approach avoiding style. In table no (4.6) the mean value was 4.0 revealed that majority of head teachers were agreed to get relevant information firstly in the situation when confronted to a problem.

Overall the mean value of approach avoiding style was 4.0 showed that head teachers don't examine the consequences of problems after the solution, they try to solve problem when confronted, don't take time to assess the result of every alternativeness and think about the possible ways to go the next step.

Table 4.7

*Assess Personal Control (PC) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
PC1	7(3.5%)	37(18.5%)	32(16%)	107(53.5%)	17(8.5%)	4.0
PC2	13(6.5%)	26(13.5%)	66(33%)	77(38.5%)	18(9%)	3.3
PC3	8(3%)	35(17.5%)	77(38.5%)	67(33.5%)	67(33.5%)	3.2
PC4	4(2%)	31(15.5%)	52(26%)	71(35.5%)	42(21%)	4.0
PC5	4(2%)	32(16%)	43(21%)	81(40.5%)	40(20%)	4.0
Over all mean						4.0

Result showed that 18.5% of head teachers were disagreed while 53.5% of head teachers agreed with personal control. The mean score was 4.0 in table no (4.7) showed that majority of head teachers were agreed when their first efforts fail to solve a problem after that they are uneasy about their abilities to control the situation. Moreover result showed that 13.5% of head teachers disagreed but 38.5% of head teachers agreed with personal control. In table no (4.6) the mean value was 3.3 showed that mostly head teachers were agreed, occasionally they don't stop and take time to deal with the problems but just go to the next stage.

Result showed that 17.5% of head teachers were disagreed whereas 38.5% of head teachers were not sure with personal control. In table (4.7) the mean value was 3.2 showed that majority of head teachers were agreed when they work on the problem and feel like they are wandering and not getting down to the real issue. Furthermore the result showed that 15.5% of head teachers disagreed although 35.5% of head teachers were agreed with personal control. The mean value was 4.0 in table no (4.7) showed that Mostly head teachers were agreed to make sudden decisions and later regret them.

Result showed that 16% of head teachers disagreed, 16% of head teachers while 40.5% of head teachers were agreed with personal control. The mean score was 4.0 in table no (4.7) showed that mostly head teachers were agreed when they are emotionally; they can no longer see the options of solving a particular problem.

Overall the mean score of personal control was 4.0 revealed that when the first efforts of head teachers was failed to solve a problem then they are nervous about their abilities to control the situation, they don't stop and take time to deal with the problems but just go to the next stage and make quick decisions.

Table 4.8

*Problem Solving Skills (PSS) of Head-Teachers at primary school level*

Item No.	Items	Mean
1	PSC	4.0
2	AAS	4.0
3	PC	3.4
Overall mean		4.0

Overall the mean score of problem solving skills was 4.0 which showed that head teachers having confidence, trust, using effective and creative ways while solving problems to control the situations, don't examine the consequences of problems after the solution, they try to solve problem, don't take time to assess the result of every alternativeness and think about the possible ways to go the next step and failed to solve a problem then they are nervous about their abilities to control the situation, they don't stop and take time to deal with the problems but just go to the next stage and make quick decisions.

**Section III Transformational or Transactional Leadership Style at Primary School Level**

Objective 2: To find out the transactional or transformational leadership style of head-teachers at primary school level.

*Determine the transactional or transformational leadership style of head-teachers at primary school level.*

<b>S/NO</b>	<b>Leadership Style</b>	<b>Numbers</b>
1	Transformational leadership	154
2	Transactional leadership	46

The above table shows that out of 210 head teacher 154 have transformational leadership style while 46 head teachers have transactional leadership style at primary school level.

Table 4.9

*Determine the Idealized Influence (II) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
II1	0%	0%	9(4.5%)	78(39%)	113(56.5%)	4.52
II2	0%	0%	16(8%)	73(36.5%)	111(56.5%)	4.47
II3	0%	0%	10(5%)	81(40.5%)	109(54.5%)	4.49
II4	0%	0%	7(3.5%)	96(48%)	97(48.5%)	4.45
II5	0%	0%	23(11.5%)	87(43.5%)	90(45%)	4.33
II6	0%	0%	7(3.5%)	122(61%)	17(35.5%)	4.32
II7	0%	0%	11(5.5%)	96(48%)	93(46.5%)	4.41
II8	0%	0%	9(4.5%)	72(36%)	119(56.5%)	4.55
Over all mean						4.44

Result show that 4.5% of head teachers were not sure while 56.5% of head teachers were strongly agreed with idealized influence. In table (4.9) the mean value 4.52 showed that majority of head teachers were strongly agreed to feel proudly when they work with their subordinates. Result showed that 8% of head teachers were not sure whereas 56.5% of head teachers were strongly agreed with idealized influence. The mean score was 4.47 in table no (4.9) showed that

majority of head teachers were strongly agreed to prioritize their collective interest on the personal interest of subordinates.

Result show that 5% of head teachers were not sure while 54.5% of head teachers strongly agreed with idealized influence. In table (4.9) the mean value was 4.49 showed that mostly head teachers were strongly agreed to work on such a way that their subordinate respect them. Result show that 3.5% of head teachers were not sure whereas 48.5% of head teachers strongly agreed with idealized influence. The mean score was 4.45 in table no (4.9) showed that majority of head teachers were strongly agreed that they are showing courage and strength in the work of their subordinates.

Result show that 11.5% of head teachers were not sure however 45% of head teachers strongly agree with idealized influence. The mean score was 4.33 in table no (4.9) showed that mostly head teachers were strongly agreed that they talk with subordinates about their most important beliefs and values. Result show that 3.5% of head teachers were not sure while 61% of head teachers were agreed with idealized influence. In table no (4.9) the mean value was 4.2 revealed that majority of head teachers were strongly agreed that they especially understand the importance of work.

Result show that 5.5% of head teachers were not sure whereas 48% of head teachers agreed with idealized influence. In table no (4.9) the mean value was 4.0 revealed that Majority of head teachers were strongly agreed to think before the ethical consequences while making a decision. Result show that 4.5% of head teachers were not sure whereas 56.5% of head teachers were strongly agreed with idealized influence. The mean score was 4.5 in table no (4.9) showed that mostly head teachers were strongly agreed that they give emphasis to the whole specified goals of the school.

Overall the mean value of idealized influence was 4.44 showed that majority of head teachers were feel proudly when they work with their subordinates, prioritize their collective interest over the personal interest of subordinates, showing strength and courage during work of their subordinates, talk with subordinates about their most important beliefs and values, try to understand the importance of work and think before the ethical consequences while making a decision to give emphasis to the whole specified goals of the school.

Table 4.10

*Determine Inspirational Motivation (IM) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
IM1	0%	0%	12(6%)	11(55.5%)	77(88.5%)	4.32
IM2	0%	0%	10(5%)	117(58.5%)	73(36.5%)	4.31
IM3	0%	0%	33(16.5%)	104(52%)	63(31.5%)	4.15
IM4	0%	0%	15(7.5%)	115(57.5%)	70(35%)	4.27
Over all mean						4.26

Result showed that 6% of head teachers were not sure while 88.5% of head teachers were strongly agreed with inspirational motivation. In table no (4.10) the mean value was 4.32 showed that majority of head teachers were strongly agreed to communicate with their subordinates and optimistic related to their future. Result showed that 5% of head teachers were not sure although 58.5% of head teachers were agreed with inspirational motivation. The mean value was 4.31 in table no (4.10) showed that majority of head teachers were agreed that they communicate enthusiastically with their subordinated when they require something for work.

Result showed that 16.5% of head teachers were not sure whereas 52% of head teachers agreed with inspirational motivation. In table no (4.10) the mean value was 4.15 revealed that mostly head teachers were agreed they express clearly their sightedness/intelligence/knowingness. Result showed that 7.5% of head teachers were not sure while 57.5% of head teachers agreed with inspirational motivation. In table no (4.10) the mean value was 4.27 showed that majority of head teachers were agreed and ensured that their subordinates will be achieve the desire goals.

Overall the mean value was 4.26 revealed that head teachers were optimistic to communicate with subordinates when they require something for work and ensured that their subordinates will be achieve the desired goals.

Table 4.11

*Determine Intellectual Stimulation (IS) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
IS1	0%	0%	20(10%)	123(61.5%)	57(28.5%)	4.18
IS2	0%	0%	22(11.5%)	115(57.5%)	62(31%)	4.19
IS3	0%	0%	12(6%)	112(56%)	76(38%)	4.32
IS4	0%	0%	19(9.5%)	116(58%)	65(32.5%)	4.23
Over all mean						4.23

Result show that 10% of head teachers were not sure whereas 61.5% of head teachers agreed with intellectual stimulation. In table no (4.11) the mean value was 4.18 showed that majority of head teachers were agreed that they examine the pros and cons of numerous recognized problems. Result show that 11.5% of head teachers were not sure but 57.5% of head teachers were agreed with intellectual stimulation. The mean value was 4.19 in table no (4.11) showed that mostly head teachers were agreed when solving problems with different approaches.

Result show that 6% of head teachers were not sure while 56% of head teachers agreed with intellectual stimulation. The mean value was 4.32 in table no (4.11) showed that majority of head teachers were agreed to guide subordinates to look the problem with different angles. Result show that 9.5% of head teachers were not sure whereas 58% of head teachers agreed with intellectual stimulation. In table no (4.11) the mean value was 4.23 showed that majority of head teachers were agreed that they direct subordinates to work with different way.

Overall the mean value was 4.23 revealed that head teachers examined the pros and cons of various problems and used different approaches to guide subordinates to look the problem with different way.

Table 4.12

*Determine Individualized Consideration (IC) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
IC1	0%	0%	19(9.5%)	116(58%)	65(32.5%)	4.23
IC2	0%	0%	10(5%)	110(55%)	80(40%)	4.35
IC3	0%	0%	14(7%)	97(48.5%)	89(44.5%)	4.37
IC4	0%	0%	7(3.5%)	92(46%)	101(50.5%)	4.47
Over all mean						4.35

Result show that 9.5% of head teachers were not sure whereas 58% of head teachers agreed with individualized consideration. The mean value 4.23 in table (4.12) showed that majority of head teachers were agreed they spent time, train and teach to subordinates. Result show that 5% of head teachers were not sure while 55% of head teachers agreed with individualized consideration. In table (4.12) the mean value was 4.35 revealed that Mostly head teachers were agreed they treat teachers and staff as individuals not like the members of school.

Result show that 7% of head teachers were not sure although 48.5% of head teachers agreed with individualized consideration. In table (4.12) the mean value was 4.37 showed that majority of head teachers were agreed to accept the fact that each and every person in the school has different needs, desire and abilities. Result show that 3.5% of head teachers were not sure while 50.5% of head teachers were strongly agreed with individualized consideration. The mean value 4.47 in table (4.12) showed that Mostly head teachers were strongly agreed that they are helping to their subordinates in the developing of strengths.

Overall the mean score was 4.35 showed that head teachers spent time, teach, train and help to develop the strengths of their subordinates as individuals not like the members of school and accept the fact that each and every person in the school has different needs, desire and abilities.



Table 4.13

*Transformational Leadership Style of Head-Teachers at primary school level*

Item No.	Items	Mean
1	II	4.4
2	IM	4.2
3	IS	4.2
4	IC	4.3
Overall mean		4.27

Overall the mean value of transformational leadership style was 4.27 revealed that majority of head teachers were feel proudly when they work with their subordinates, prioritize their collective interest over the personal interest of subordinates, talk with subordinates about their most important beliefs and values, try to understand the importance of work and think before the ethical consequences while making a decision. Furthermore, they were optimistic to communicate with subordinates when they require something for work and ensured that their subordinates will be achieving the desired goals. Examined the pros and cons of various problems and used different approaches to guide subordinates to look the problem with different way. spent time, teach, train and accept the fact that each and every person in the school has different needs, desire and abilities.

Table 4.14

*Determine Contingent Reward (CR) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
CR1	0%	0%	8(4%)	93(46.5%)	99(49.5%)	4.45
CR2	0%	0%	14(7%)	107(53.5%)	97(39.5%)	4.32
CR3	0%	2(1%)	19(9.5%)	109(54.5%)	70(35%)	4.23
CR4	0%	1(.5%)	16(8%)	82(41%)	101(50.5%)	4.41
CR5	0%	7(3.5%)	26(13%)	106(53%)	61(30.5%)	4.10
CR6	0%	2(1%)	22(11%)	96(48%)	80(40%)	4.27
CR7	1(.5%)	3(1.5%)	17(8.5%)	101(50.5%)	78(39%)	4.26
CR8	0%	0%	20(10%)	118(59%)	62(31%)	4.21
Over all mean						4.28

Result showed that 4% of head teachers were not sure whereas 49.5% of head teachers strongly agreed with contingent reward. In table (4.14) the mean value was 4.45 showed that majority of head teachers were strongly agreed to assist the effort and hard work of teachers and staff. Result showed that 7% of head teachers were not sure while 53.5% of head teachers were agreed with contingent reward. The mean value was 4.32 in table (4.14) showed that mostly head teachers were agreed that focusing to the subordinates on the responsibilities to attain the goals of the task.

Result showed that 1% of head teachers were disagreed while 54.5% of head teachers agreed and with contingent reward. The mean value was 4.23 in table no (4.14) showed that majority of head teachers were agreed to explain the results when subordinates achieve their goals. Result showed that 0.5% of head teachers were disagreed although 50.5% of head teachers were strongly agreed with contingent reward. In table (4.14) the mean value was 4.41 showed that mostly of head teachers were strongly agreed when subordinates achieve their goals they are satisfied.

Result showed that 3.5% of head teachers were disagreed while 35.5% of head teachers agreed with contingent reward. In table (4.14) the mean value was 4.10 showed that majority of head teachers were agreed they focus on any mistakes, deviation and irregularities in the level of performance of any teaching staffs. Result showed that 1% of head teachers were disagreed whereas 48% of head teachers agreed with contingent reward. The mean value 4.27 in table (4.14) showed that majority of head teachers were agreed and focus to solve the dissatisfaction or complaints of the staff.

Result showed that 1.5% of head teachers disagreed although 50.5% of head teachers agreed with contingent reward. The mean value 4.26 in table (4.14) showed that mostly head teachers were agreed that they assess the weakness and mistakes of teachers and staff. Result show that 10% of head teachers were not sure while 59% of head teachers were agreed with contingent reward. In table (4.14) the mean value was 4.21 showed that majority of head teachers were agreed when any teachers and member of the staff are failing to achieve the goals they focus to help them.

Overall the mean value 4.28 showed that head teachers focus on any mistakes, deviation and irregularities in the level of performance, solve complaints of the staff, assess the teachers, help them when failing to achieve the goals and fell satisfied to announce the results when subordinates achieve goal.

Table 4.15

*Determine Management by Exception (ME) of Head-Teachers at primary school level*

Item No.	Strongly Disagree	Dis-Agree	Not-Sure	Agree	Strongly Agree	Mean
ME1	6(3%)	21(10.5%)	34(17%)	108(54%)	31(15.5%)	4.0
M32	15(17.5%)	32(16%)	56(48%)	77(38.5%)	20(10%)	3.27
ME3	37(18.5%)	60(30%)	59(29.5%)	32(16%)	12(6%)	2.61
ME4	45(22.5%)	52(26%)	54(21.5%)	26(23%)	14(7%)	2.66
Over all mean						3.1

Result show that 3% of head teachers were strongly disagreed whereas 54% of head teachers were agreed with management by exception. The mean value 3.6 in table (4.15) showed that majority of head teachers were agreed when there is no serious issue occurs they do not interfere in the work teachers and staff. Furthermore result show that 10% of head teachers strongly agreed while 48% of head teachers were not sure with management by exception. . In table (4.15) the mean value was 3.27 revealed that mostly head teachers were not sure that they are not waiting until their subordinates did a mistake before taking an action.

Result show that 6% of head teachers strongly agreed whereas 30% of head teachers disagreed with management by exception. . In table (4.15) the mean value was 2.61 revealed that Majority of head teachers were disagreed to accept that there is no need to improve if something goes wrong. Result show that 7% of head teachers strongly agreed while 26% of head teachers were disagreed with management by exception. The mean value 2.66 in table no (4.15) showed that mostly head teachers were disagreed that they are demonstrating and take only action if problem reached to a serious point.

Overall the mean score 3.1 showed that head teachers were not interfere in work of teachers also not waiting until their subordinates did a mistake before taking an action and they accept that there is no need to improve if something goes wrong and take only action if problem reached to a serious point.

Table 4.16

*Transactional Leadership Style of Head-Teachers at primary school level*

S/No.	Constructs	Mean
1	Contingent Reward	4.2
2	Management by Exception	3.4
Overall mean		3.8

The mean value of contingent reward was 4.2 shows that head teachers focus on mistakes, deviation and irregularities in the level of performance, solve staff complaints, assess teachers, help them when fail to achieve the goals and provide them rewards when subordinates accomplish the task Furthermore, the mean value 3.4 shows that head teachers take action when there is a serious problem otherwise are not interfering in work of teachers. Overall the mean value of transactional leadership style was 3.8.

#### **Section IV Relationship between Problem Solving Skills with Transformational or Transactional Leadership Style at Primary School Level**

**Objective 3:** To analyze the problem solving skills among head-teachers with transactional or transformational leadership style at primary school level.

Table 4.17

*Analyze Problem Solving Skills with Transformational Leadership Style*

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	Problem Solving Skills	Transformational Leadership Style
Problem Solving Skills	1	
Transformational Leadership Style		.52**

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P<0.05\*\*

The above table 4.17 shows inter correlation of problem solving skills with transformational leadership style of Head Teachers. Correlation of problem solving skills with transformational leadership style is .52\*\*. It showed strong level of correlation (Senthilnathan, 2019).

Table 4.18

*Analyze Problem Solving Skills with Transactional Leadership Style*

	Problem Solving Skills	Transactional Leadership Style
Problem Solving Skills	1	
Transactional Leadership Style		.346**

P<0.05\*\*

The above table 4.18 shows inter correlation of problem solving skills with transactional leadership style of Head Teachers. Correlation between problem solving skills with transactional leadership style was .346\*\* which is weak correlation (Senthilnathan, 2019).

Table 4.19

*Correlation analysis of problem solving skills (PSS) sub-scales with the sub-scales of transactional and transformational leadership style*

S.NO	Sub-scales of P.S.S	Idealized Influence	Inspirational Motivation	Intellectual Stimulation	Individualized Consideration	Contingent Reward	Management by Exception
1	Problem Solving Confidence	.39**	.54**	.40**	.37**	.26**	-.03
2	Approach Avoiding Style	.36**	.30**	.42**	.27**	.24**	.25**
3	Personal Control	.20**	.11	.10	.07	-.02	-.01

P<0.05\*\*

The above table 4.19 shows Pearson's correlation of problem solving confidence with idealized influence (.39\*\*), inspirational motivation (.54\*\*), intellectual stimulation (.40\*\*), and individualized consideration (.37\*\*). Inspirational motivation of transformational leadership style has higher impact while individualized consideration has low impact on problem solving confidence. Inspirational motivation enhance the self-perception, confidence and capability of head teachers towards problem solving. The correlation of problem solving confidence with contingent reward (.26\*\*), management by exception is (-.03), likewise, the contingent reward of transactional style has some influence while management by exception has weak correlation.

The correlation of approach avoiding style with idealized influence (.36\*\*), inspirational motivation is (.30\*\*), intellectual stimulation is (.42\*\*), and individualized consideration is (.27\*\*), these statistics indicate the intellectual stimulation of transformational style has a large impact on approach avoiding style and least on individualized consideration, and there is a minimum difference between idealized influence and inspirational motivation approach avoiding style with contingent reward is (.24\*\*) and approach avoiding style with management by exception is (.25\*\*).. On the other hand contingent reward of transactional style has same impact as that of management by exception. Furthermore the correlation of personal control with idealized influence is (.20\*\*), inspirational motivation is (.11\*\*), intellectual stimulation is (.10), individualized consideration is (.07), contingent reward is (-.02) and management by exception is (-.01).

Overall highest correlation was found among problem solving confidence with inspirational motivation which is .54\*\*, it means that transformational style has greater correlation with problem solving confidence while the lowest was found in personal control with management by exception (-.01).



Table 4.20

*Correlation analysis of problem solving skills (PSS) with transactional and transformational leadership style*

Variable	Transformational Leadership Style	Transactional Leadership Style
Problem Solving Skills	.515**	.325**

P<0.05\*\*

The above table 4.20 showed correlation of problem solving skills with transformational and transactional leadership styles of Head Teachers. The Pearson's correlation of problem solving skills with transformational leadership was (.515\*\*) which showed significant correlation while correlation of problem solving skills with transactional leadership (.325\*\*) which was lower than transformational leadership style.

## **CHAPTER 5**

# **SUMMARY, FINDINGS, CONCLUSION, DISCUSSION AND RECOMMENDATIONS**

### **5.1 Summary**

The present research study was conducted to analyze the problem solving skills of head teachers with transactional or transformational leadership style at primary school level. The main objectives of the study were to assess the problem solving skills of head teachers at primary school level, to find out the transactional or transformational leadership style at primary school level and the third one was to analyze the relationship of problem solving skills of head teachers with transformational or transactional leadership style at primary school level. The population of the present study was head teachers working in the public sector schools in Islamabad. The researcher collected data from five sectors through census sampling which are 210. In the present research study two scales were used for data collection. For problem solving skills the researcher used problem solving inventory consists of three sub-scales such as problem solving confidence, approach avoiding style and personal control. Second one for transformational and transactional leadership style having sub-scales contains idealized influence, inspirational motivation, intellectual motivation, individualized consideration, contingent reward and management by exception. The problem solving skills, transformational and transactional leadership style were checked by applying mean description while to analyze the problem solving skills of head teachers with transformational or transactional leadership style at primary school level the researcher applied correlation on third objective of the study. In chapter 4 the final analysis and interpretation of data was discussed.

Head teachers have problem solving confidence to solve the problems using creative and effective ways. Majority of head teachers were used idealized influence in work to feel proud with their subordinates, over personal interest they prioritized the collective interest. Furthermore majority of head teachers were agree to use the culture of reward in the schools in the completion of task accurately and positively Problem solving skills were moderate level of correlation with

transformational leadership style of head teachers at primary school level but weak level of correlation with transactional leadership styles.

## **5.2 Findings**

### **5.2.1 Part-II Objective No 1**

To assess the problem solving skills of head-teachers at primary school level.

In the light of scale developed as problem solving inventory (PSI) this objective was pursued using quantitative approach.

1. In table no (4.5) the mean value was 4.00 showed the ability of head teachers to solve the problems using creative and effective ways, make planning, and manage the time to handle the situations.
2. Table no (4.6) the mean value was 3.7 showed approach avoiding style of head teachers at primary school level. It showed that majority of head teachers don't examine the consequences of the problem when they failed to solve it. But few of them think about the problem before choosing the next phase and generate the idea comes in their mind when they are solving a problem.
3. Table no (4.7) the mean value 3.4 findings showed that when their first attempt was failed to solve a problem then they are uneasy about their abilities to control the situation. They don't stop and take time to deal with the problems but just go to the next stage and work on the problem to feel like they are wandering and not getting down to the real issue. Make urgent decisions and later regret them.

### **Objective No 2**

To find out the transactional or transformational leadership style of head-teachers at primary school level

4. Finding showed that out 200 head teachers 154 head teachers have transformational leadership style while 46 head teachers have transactional leadership style at primary school level.
5. In table (4.9) the mean value 4.4 showed that head teachers feel proudly when they work with their subordinate and prioritize their collective interest on the personal interest of

subordinates. Furthermore they work such a way that their subordinate respect them, show courage and strength in the work of their subordinates. Head teacher were talked with subordinates about their most important beliefs and values, understand the importance of work and think before the ethical consequences while making a decision. Mostly head teachers give emphasis to the whole specified goals of the school.

6. In table (4.10) the mean score was 4.3 showed that head teachers communicate with their subordinates and optimistic related to their future. They communicate enthusiastically with their subordinated when they require something for work and ensured that their subordinates will achieve the desire goals.
7. Table (4.11) the mean value 4.2 showed that head teachers examined the pros and cons of numerous recognized problems and solved the problems with different approaches. Head teachers guide subordinates to look the problem with different angles and direct subordinates to work with different way.
8. In table (4.12) the mean score 4.3 revealed that head teachers spent time, train and teach to subordinates, treat teachers and staff as individuals not like the members of school. Majority of head teachers were agreed to accept the fact that each and every person in the school has different needs, desire and abilities. Head teachers are helping subordinates to develop their strengths.
9. Table (4.14) the mean value 4.2 showed that head teachers assist the effort and hard work of teachers and staff. Head teachers focusing to the subordinates on the responsibilities to attain the task and satisfied when subordinates achieve their goals. Furthermore head teachers focus on mistakes, deviation and irregularities in the level of performance of any teaching staffs and focus to solve the dissatisfaction or complaints of the staff. They assess the weakness, mistakes and help them to achieve the goals of teachers and staff if any member of the staff is failing.
10. In table (4.15) the mean score 3.0 showed that head teachers don't interfere in work of teachers and staff when there is no serious issue occurred. Although some of head teachers were not sure to wait until their subordinates did a mistake before taking an action and demonstrate to take action only if problem reached to a serious point.

### **5.2.2 Part-III Objective No 3**

To analyze the relationship of problem solving skills among head-teachers with transactional or transformational leadership style at primary school level.

11. Findings of objective number 3 results showed correlation of problem solving skills of head teachers with transformational leadership style. The correlation between problem solving with transformational leadership style was  $.50^{**}$  which is strong level of correlation (Table no.4.17), with each other so the null hypothesis was failed to rejected at the 0.05 level of significance.
12. Findings of objective number 3 results showed correlation of problem solving skills of head teachers with transactional leadership style. The correlation between problem solving with transactional leadership style was  $.346^{**}$  which is weak correlation as shown (Table no.4.18) with each other so the null hypothesis was failed to accepted at the 0.05 level of significance. As transactional leaders tend to focus on short-term goals and may not have a long-term vision for to a lack of strategic planning and a failure to adapt to changing circumstances.
13. To accomplish the third objective of the study was to analyze the problem solving skills among head-teachers with transactional or transformational leadership style at primary school level the sub-variables of problem solving skills, transactional and transformational leadership styles were correlated by using Pearson's correlation table (4.19) result showed that problem solving skills sub-scales with the sub-scales of transformational and transactional leadership styles of Head Teachers. The Pearson's correlation of problem solving confidence with idealized influence ( $.39^{**}$ ), problem solving confidence with inspirational motivation ( $.54^{**}$ ), problem solving confidence with intellectual stimulation ( $.40^{**}$ ), problem solving confidence with individualized consideration ( $.37^{**}$ ). The correlation of problem solving confidence with contingent reward ( $.26^{**}$ ) and problem solving confidence with management by exception is ( $-.03$ ). The correlation of approach avoiding style with idealized influence ( $.36^{**}$ ), approach avoiding style with inspirational motivation is ( $.30^{**}$ ), approach avoiding style with intellectual stimulation is ( $.42^{**}$ ), approach avoiding style with individualized consideration is ( $.27^{**}$ ), approach avoiding style with contingent reward is ( $.24^{**}$ ) and approach avoiding style with management by exception is ( $.25^{**}$ ). Furthermore the correlation of personal control and idealized influence is ( $.20^{**}$ ), personal control with inspirational motivation is ( $.11^{**}$ ), personal

control with intellectual stimulation is (.10), personal control with individualized consideration is (.07), personal control with contingent reward is (-.02) and personal control with management by exception is (-.01). The highest correlation was found among problem solving confidence with inspiration motivation which was .54\*\*, while the lowest found among personal control with management by exception (-.01).

### **5.3 Discussion**

The present investigation conducted by the researcher was the analysis of problem solving skills among head teachers with transactional or transformational leadership style at primary school level in public sector of Islamabad. The researcher analyzed the objectives by using SPSS 20<sup>th</sup> version. The result showed that head teachers have problem solving confidence to solve the problems using creative and effective ways. They used idealized influence in work to feel proud with their subordinates, over personal interest they prioritized the collective interest. Furthermore they were agreed to use the culture of reward in the schools in the completion of task accurately and positively Problem solving skills were moderate level of correlation with transformational leadership style of head teachers at primary school level but weak level of correlation with transactional leadership styles.

In the era of 21<sup>st</sup> century the important one competency is problem solving and today world the employer needs to know the solving of non-routine problems (Ergul, 2017). In the era of 21<sup>st</sup> century students must have problem solving skills and creative thinking skills and there are some challenges teachers are still facing. To overcome easily in daily life the problem solving skills help individuals. Problem solving skills make an individual self-confident, independent and creative thinker (Ozreçberoglu & Çaganaga, 2018). In classrooms students are not involved by teachers to analyze the non- routine problem which makes self-confident, produce alternative ways and judgment (Isik et al., 2011). By using creative thinking skills and different strategies non-routine problems which are not solved by specific formulas (Memnum, 2015). Among the desired goals and the existing state problem is considered a disparity between them or a difficulty to gains the goals and organizational level routine problems are front of managers for making their attention in the given agendas (Daft, 2014). The identification of gap among goals and reality and taking of actions to find the solution is said to be problem solving and managers make it simple to become problem solvers (Shermerhorn, 2013). For employers one of the most

desirable employment skills are considered problem solving skills, many organizations manage the teams and they are providing problem solving skills to their managers (He, 2015).

Hamalainen et al., (2015) build a study to understand the problem solving skills of adults. Yoo & Park (2015), in agreement with the current study, explore the cause based learning group effect on problem solving ability, learning motivation and communication skills of students. Problem solving ability, learning motivation and communication skills show significant and positive effect by cause based learning group than the group of lecture based learning.

Among problem solving skills and its component personal control there was statistically significant difference found and in term of gender no significant difference was found among students (Safari & Meskini, 2015). In problem solving inventory there was greater score found in personal control of those students whose belong to urban areas, lower problem solving confidence and approach avoiding style was found in unmarried students compared to married students (Asimopoulos, Martinaki & Maniadaki, 2018). Personal control of problem solving inventory was found at average level that show the ability of someone to stay control in the problematic situation (Ergün & Arslan, 2017). Devi (2021), found the similar result that the ability of the principal to communicate effectively in improving the quality of education in the principal's behavior in cultivating a disciplined lifestyle and interacting directly with school residents and in problem-solving through a system of discussions, meetings, or deliberations. then, the ability of the principal in developing academic and non-academic programs that can produce good quality for the school.

Moreover, Nurdyansyah et al., (2017) also concluded a study that problem solving ability are still low without knowing the stages of scientific thinking that must understood by learners so the learners memorize due to the absence of habituation of teachers for students to think logically. According to Ommundsen (2001) to complete the problem solving solution four steps are required. Understanding the problem is the first step, students will not able to solve the problem properly without the understanding of the given problem. Once the students understand the problem properly, after that they are able to plan the purpose. Depending on their experience the second phase done by the ability. Problem solving plan has been made. Then solve the problem accordance with the plan. And the last step of the plan was to check what has been done from the first to the last phase. Examine or think about the steps which have been in the process of problem

solving is very important activity for the improvement of problem solving skills. Study conducted (Angawi, 2014) revealed that review the settlement procedure are very important factor which has been made to increase the students problem solving skills while solving a problem. According to Veelriah et al., (2017), similar results were found with the current study that high level of transformational leadership characteristics in primary school teachers.

Moreover Azizaha et al.,(2020) results also showed that transactional leadership has no significant effect on teacher satisfaction. In terms of idealized influence, inspirational motivation, intellectual stimulation and individualized consideration teachers have high level of transformational leadership (Balyer, 2012). Furthermore similar results were found in which head teachers using transformational leadership style helped other teachers in their problem solving, collaboration played an important role in problem solving. The involvement of teachers in decision making effects their problem solving and deal with issues an open atmosphere (Hauserman & Stick, 2013).

Additionally, the role of idealized influence and inspirational motivation the two dimensions of transformational leadership style has successful implementation in the change of organization. In public sector organizations, the role of transformational leadership is to promote change in better understanding (Harb & Sidani, 2019).

In contrast to the present research, Prasad & Junni (2016) examined the organizational influence of chief executive (CEO) transactional leadership style and moderating the effect of organizational dynamism. Organizational innovations were positively influenced by CEO transactional leadership style. Transactional leadership style was investigated as a moderating effect between the relationships of employee performance work life balance. On employee performance there is significant and positive of work life balance, significant and positive moderating effect found in transactional leadership style (Aslam, 2015).

The exchanges which allow the leaders for the completing of performance are the objectives, competition of the required tasks, through contractual agreement the motivation of followers, to achieve the established goals by directed behavior of followers, maintaining the current organizational situation and avoid the unnecessary risks (McCleskey.J.A, 2014). To accomplish their personal self-interest, reduce anxiety of place of work, also essence on pure organizational aims such as improved value, client service, cheap costs, and increased production



are permitted to the followers in transactional leadership (Sadeghi & Pihie, 2012). The followers best interest is occurring in transactional leadership because it is effective and followers are doing what the leader requires (Northouse, 2013). The outcomes from the research demonstrate that the suggested reward structure creates a statistically weighty upsurge in the level of motivation, engagement and learning (Park et al. 2019). When there are some mistakes committed by employees so the manager will intervene and monitors management with exceptions dimension, and the leader role in this element is to escape deviance after the goals, decide plus right the difficult parts (Veysel, 2014).

The third objective of the present study was to analyze the problem solving skills among head-teachers with transactional or transformational leadership style at primary school level showed that correlation occurred among head teachers with transactional or transformational leadership style of public school at primary level. The correlation between problem solving skills and transformational leadership style in head teachers was moderate level of correlation while problem solving skills and transactional leadership style showed weak level of correlation. The same result was found that leadership have significant relationship with the problem solving skills of head teachers (Huseyin & Izgar, 2008). According to Joseph & Osabiya (2015), findings shows similar results to the current study that motivated employees solve problems with the sense of confidence, humility, responsibility and efficiency for the best interest of organization These results were very close to the results of Sun et al.,(2017), in which the researchers concluded that in problem solving, transformational head teachers shared their goals to interpret the problems according to the larger goal, vision and mission of the school with teachers and staff keeping the interest of students in their professional, social and basic human values.

## **5.4 Conclusion**

The aim of the present study was analysis of problem solving skills among head teachers with transactional or transformational leadership style at primary school level. On the basis of findings which are stated in this chapter the following conclusions has been made.

Head teachers were using the problem solving skills while solving a problem such as problem solving confidence, approach avoiding style and personal control. Furthermore head teachers have problem solving confidence to solve the problems using creative and effective

ways, make proper planning, efforts and manage the time to handle the situations to find the actual problem.

Moreover head teachers don't examined the problem consequences, they think to solve or leave the problem, make comparison with alternatives, by using systematic way to solve the problem and analyzed the problem when they solved it although some head teachers think about the problem before choosing the next phase and generate the idea comes in their mind when they are solving a problem. In addition head teachers handle the situation when they fail to solve a problem. Moreover they don't stop to deal with the problem but just go ahead.

Majority of head teachers were used idealized influence in work to feel proud with their subordinates, over personal interest they prioritized the collective interest and show strength to encourage the subordinates. Head teachers were used inspirational motivation to motivate their subordinates and try to communicate enthusiastically and assured the subordinates to achieve their desires goals. Furthermore head teachers were used intellectual stimulation to provide an environment of motivation, thinking and creative to their subordinates. Furthermore they solved problem with different approaches after the analysis of pros and cons of the problems. Head teachers consider the needs, desire and ideas of their subordinates to develop the strength. They spent time to train and teach every individual when they need help.

Furthermore majority of head teachers were agree to use the culture of reward in the schools in the completion of task accurately and positively. Friendly environment were provided by head teachers to subordinates and avoid interference unless a serious issue was occurred,

Problem solving skills were moderate level of correlation with transformational leadership style of head teachers at primary school level but weak level of correlation with transactional leadership styles. It showed that under transformational leadership style of head teachers problems of the schools can be solved easily rather than transactional leadership style. Problem solving confidence has statistically significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration and contingent reward while problem solving confidence showed statistically negative correlation with management by exception.

Moreover approach avoiding style has statistically significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration, contingent reward and management by exception. Furthermore personal control has statistically significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration while personal control showed statistically negative correlation with contingent reward and management by exception.

In problem solving skills the most significant correlation was found among problem solving confidence with inspirational motivation of head teachers.

## **5.5 Recommendations**

Through findings and conclusions the researcher found it important to recommend the following recommendations.

1. Head teachers may provide an environment such as better work condition, collaborative working environment and appraisal to enhance the motivation of teachers because motivation enable teachers to solve problem with confidence.
2. Breaking down silos strategies may allow head teachers to more easily engage their subordinates to solve problems in which all teachers incorporate, communicate a unified vision and shared responsibilities with each other.
3. Head teachers may use their creativity in problem solving and involve teachers in decision making by utilizing their new ideas and willingness to solve problems.
4. Head teachers may motivate teachers individually to accomplish the vision and collective organizational objectives and compare their performance with other schools.
5. Head teachers may recognize the importance of transformational leadership style during school improvement and there is a need to improve transformational leadership style practice in school.
6. Head teachers leadership training programs may be conducted where head teachers and teachers receive instructions on goal setting, performance feedback and contingent reinforcement because leadership training can be valuable for individuals who are in leadership roles in organizations where a result driven approach is highly valued.

7. Ministry of education may train head teachers and teachers by organizing seminars, conferences and lectures for head teachers to develop and implement transformational leadership style at primary level and its impact and implication on problem solving skills.

### 5.5.1 Recommendations for Future Researchers

1. The current study was conducted at federal public schools of Islamabad at primary level, further studies may be carried out at different areas and levels.
2. Comparative study may be conducted in private sector school.
3. Future research may be carried out to check the other leadership styles of Head Teachers at primary school level.

### 5.6 Limitation of the study

1. The study was limited to federal public schools of Islamabad at primary level.
2. The study was limited only to head teachers of public schools.
3. The study was limited to transactional and transformational leadership styles of Head Teachers at primary school level

Table No 5.1

*Alignment of objectives, findings, conclusion and recommendations.*

S/N o	Objective	Finding	Conclusion	Recommendation
1	To assess the problem solving skills of head-teachers at primary school level.	The mean values showed ability to solve problems using creative and effective ways, make planning, and manage the time to handle the situations. It showed that majority of head teachers don't examine the	Head teachers were using problem solving skills having problem solving confidence to solve the problems using creative and effective ways, make proper planning, efforts and manage the time to handle the situations to find the actual problem.	Head teachers may provide an environment such as better work condition, collaborative working environment and appraisement to enhance the motivation of teachers because motivation enable teachers to solve problem with confidence. Breaking down silos strategies may

		<p>consequences of the problem when they failed to solve it. But few of them think about the problem before choosing the next phase. When their first attempt was failed to solve a problem then they are uneasy about their abilities to control the situation. They don't stop and take time to deal with the problems but just go to the next stage, make urgent decisions and later regret them.</p>	<p>They don't examined the problem consequences, think to solve or leave it, make comparison with alternatives, using systematic way to solve the problem and analyzed the problem when solved it. Some think about the problem before choosing the next phase and generate the idea comes in their mind. In addition they handle situation when they fail to solve a problem.</p>	<p>allow head teachers to more easily engage their subordinates to solve problems in which all teachers incorporate, communicate a unified vision and shared responsibilities with each other. Head teachers may use their creativity in problem solving and involve teachers in decision making by utilizing their new ideas and willingness to solve problems.</p>
2	<p>To find out the transactional or transformational leadership style of head-teachers at primary school level.</p>	<p>The mean value showed that head teachers feel proud when they work with subordinate. They work such a way that subordinate respect them, show courage and strength in the work of subordinates. Talked with</p>	<p>Head teachers were used idealized influence in work to feel proud with subordinates, over personal interest they prioritized the collective interest and show strength to encourage subordinates. They</p>	<p>Head teachers may motivate teachers individually to accomplish the vision and collective organizational objectives and compare their performance with other schools. Head teachers may recognize the importance of transformational leadership style during school</p>

		<p>subordinates about their most important beliefs and values, understand the importance of work and think before the ethical consequences while making decision. Mostly head teachers give emphasis to the whole specified goals of the school. Communicate with subordinates and optimistic to their future. They communicate enthusiastically when they require something for work and ensured that subordinates will achieve the desire goals. Spent time, train and teach the subordinates as individuals not like the members of school. Majority of head teachers were</p>	<p>used inspirational motivation to motivate subordinates and try to communicate enthusiastically and assured them to achieve their desires goals. Furthermore head teachers were used intellectual stimulation to provide an environment of motivation, They solved problem with different approaches after the analysis of pros and cons of the problems. Consider the needs, desire and ideas of subordinates to develop the strength. They spent time to train and teach every individual when they need help.</p>	<p>improvement and there is a need to improve transformational leadership style practice in school. Transformational leadership style may introduce for head teachers and teachers through work shop, training and seminars by sharing vision, creating trust and raise the expectation. Transactional leadership training program may be conducted where head teachers and teachers receive instructions on goal setting, performance feedback, and contingent reinforcement.</p>
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		<p>agreed to accept the fact that each and every person in the school has different needs, desire and abilities. They are helping to develop their strengths. Assist the effort and hard work of teachers and staff. Heads focusing to subordinates on the responsibilities to attain the task and satisfied when subordinates achieve the goals. Furthermore head teachers focus on mistakes, deviation and irregularities in the level of performance of any teaching staffs and focus to solve complaints. They assess the weakness, mistakes and help them to achieve the goals of teachers and staff if any member</p>		
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		<p>of the staff is failing. Don't interfere in work of teachers and staff when there is no serious issue occurred. Although some of head teachers were not sure to wait until their subordinates did a mistake before taking an action and demonstrate to take action only if problem reached to a serious point.</p>		
3	<p>To analyze the relationship of problem solving skills among head-teachers with transactional or transformational leadership style at primary school level.</p>	<p>The correlation between problem solving skills with transformational leadership style was .499** which is moderate level of correlation. Results showed correlation between problem solving with transactional leadership style was .346** which is weak correlation. The</p>	<p>Problem solving skills was moderate level of correlation with transformational leadership style of head teachers but weak level of correlation with transactional leadership styles. It is concluded that under transformational leadership style, problems of the schools can be solved easily rather than</p>	<p>The aim of leadership training programs for head teachers may be aligned with problem solving skills to expose the school problems and instruction on the best ways to address them. Ministry of education and professional training may organize seminars, conferences and lectures for head teachers to develop and implement transformational leadership style at primary level and its</p>



		<p>highest correlation was found among problem solving confidence with inspiration motivation which was .54**, while the lowest found among personal control with management by exception (-.01).</p>	<p>transactional leadership style. Problem solving confidence has statistically significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration and contingent reward while problem solving confidence showed statistically negative correlation with management by exception. Approach avoiding style has statistically significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration, contingent reward and management by exception. Personal control has statistically</p>	<p>impact and application on problem solving skills</p>
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			significant relationship with idealized influence, inspirational motivation, intellectual stimulation, individualized consideration while negative correlation with contingent reward and management by exception.	
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NATIONAL UNIVERSITY OF MODERN LANGUAGES  
FACULTY OF SOCIAL SCIENCES  
DEPARTMENT OF EDUCATION

M.L.1-3/Edu/2021

Dated: 02-07-2021

To: Shah Hussain,  
1791/MPhil/Edu/F-19

Subject: APPROVAL OF M.PHIL THESIS TOPIC, AND SUPERVISOR

1. Reference to Letter No, M.L.1-3/Edu/2021/, dated 16-02-2021, the Higher Authority has approved the topic and supervisor on the recommendation of Faculty Board of Studies vide its meeting held on 11 February 2021 & Board of Advanced Studies and Research dated 02-06-2021

a. Supervisor's Name & Designation

Dr. Aisha Bibi,  
Assistant Professor,  
Department of Education NUML, Islamabad.

b. Topic of Thesis

Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level

2. You may carry out research on the given topic under the guidance of your Supervisor and Submitted the thesis for further evaluation within the stipulated time. It is to inform you that your thesis should be submitted within described period by 31<sup>st</sup> July 2022 positively for further necessary action please.

3. As per policy of NUML, all MPhil/PhD Thesis is to be run on turnitin by QEC of NUML before being sent for evaluation. The university shall not take any responsibility for high similarity resulting due to thesis run from own sources.

4. Thesis is to be prepared strictly on NUML's format that can be taken from Coordinator, Department of Education

Telephone No: 051-9265100-110 Ext: 2090

E-mail: hod-edu@numl.edu.pk

Dr. Wajeena Shahid  
Head,  
Department of Education

CC:

Dr. Aisha Bibi

Shah Hussain

**Problem Solving Skills Scale**

**Demographic Information**

1. **Gender:** (1) Male  (2) Female
2. **Work Experience**  
 (1) Less than 5 years  (2) 5-10  (3) 11-15  (4) 16 or above
3. **Age Limit**  
 (1) 30-35 years  (2) 36-40  (3) 41-45  (4) 46 or above
4. **Professional Qualification**  
 (1) B.Ed  (2) M.Ed  (3) any other.....

**Problem solving skills:** Problem solving skills are the abilities and skills of an individual to solve a problem.

Strongly Disagree= 1, Disagree= 2, Not Sure=3, Agree= 4, Strongly agree=5

Code No	Items	SD	DA	NS	A	SA
<b>Problem Solving Confidence</b>						
Ability of someone to solve problems having confidence on his/her-self when faced a wide range of problems						
PSC1	I am usually able to think of creative and effective alternatives to my problems.	1	2	3	4	5
PSC2	I have the ability to solve most problems even though initially no solution is immediately apparent.	1	2	3	4	5
PSC3	Many of the problems I face are too complex for me to solve	1	2	3	4	5
PSC4	When solving a problem, I make decisions	1	2	3	4	5

	that I am happy with later.					
PSC5	When I make plans to solve a problem, I am almost certain that I can make them work.	1	2	3	4	5
PSC6	Given enough time and effort, I believe I can solve most problems that confront me	1	2	3	4	5
PSC7	When faced with a novel situation, I have confidence that I can handle problems that may arise.	1	2	3	4	5
PSC8	I trust my ability to solve new and difficult problems.	1	2	3	4	5
PSC9	After making a decision, the actual outcome is usually similar to what I had anticipated	1	2	3	4	5
PSC10	When confronted with a problem, I can handle the situation	1	2	3	4	5
PSC11	When I become aware of a problem, one of the first things I do is try to find out exactly what the problem is.	1	2	3	4	5
<b>Approach Avoiding Style</b>						
A degree to approach or avoid when facing problems is said to be approach avoiding style.						
AAS1	When a solution to a problem has failed, I do not examine why it didn't work	1	2	3	4	5
AAS 2	When confronted with a problem, I tend to do the first thing that I can think to solve it.	1	2	3	4	5
AAS3	When considering solutions to a problem, I do not take the time to assess the potential success of each alternative.	1	2	3	4	5
AAS4	After I solve a problem, I analyze what went right and what went wrong.	1	2	3	4	5
AAS5	After following a course of action to solve a problem, I compare the actual outcome with the one I had anticipated	1	2	3	4	5
AAS6	When I have a problem, I think of as many possible ways to handle it.	1	2	3	4	5
AAS7	When confronted with a problem, I consistently examine my feelings to find out what is going on in a problem situation.	1	2	3	4	5
AAS8	When considering solutions to a problem, I take the time to assess the potential success of each alternative.	1	2	3	4	5
AAS9	When confronted with a problem, I stop and think about it before deciding on a next step.	1	2	3	4	5

AAS10	I generally act on the first idea that comes to mind in solving a problem.	1	2	3	4	5
AAS11	When making a decision, I compare alternatives and weigh the consequences of one against the other.	1	2	3	4	5
AAS12	I try to predict the result of a particular course of action.	1	2	3	4	5
AAS13	When I try to think of possible solutions to a problem, I do not come up with very many alternatives.	1	2	3	4	5
AAS14	I use a systematic method to compare alternatives and make decisions.					
AAS15	When faced with a problem, I seldom assess the external forces that may be contributing to the problem.	1	2	3	4	5
AAS16	When confronted with a problem, I usually first survey the situation to determine the relevant information.	1	2	3	4	5
<b>Personal Control</b>						
When facing problems the ability of someone to control his or her behavior and emotions.						
PC1	When my first efforts to solve a problem fail, I become uneasy about my ability to handle the situation.	1	2	3	4	5
PC2	Sometimes I do not stop and take time to deal with my problems, but just kind of muddle ahead.	1	2	3	4	5
PC3	Even though I work on a problem, sometimes I feel like I'm wandering and not getting down to the real issue.	1	2	3	4	5
PC4	I make snap judgements and later regret them.	1	2	3	4	5
PC5	There are times when I become so emotionally charged that I can no longer see the alternatives for solving a particular problem.	1	2	3	4	5
<b>Do Not Include in Scoring</b>						
PC6	When confused about a problem, I don't clarify vague ideas or feeling by thinking of them in concrete terms.	1	2	3	4	5
PC7	When trying to solve a problem, one strategy I often use is to think of past problems that have been similar.	1	2	3	4	5
PC8	When thinking of ways to handle a problem, I seldom combine ideas from various alternatives to arrive at a workable solution.	1	2	3	4	5

## Transactional and Transformational leadership styles scale

### Transformational leadership

Transformational leadership is a leadership where a leader motivates, encourages and leads his/her subordinates to achieve the organizational goals and objectives.

Strongly Disagree= 1, Disagree= 2, Not Sure=3, Agree= 4 and Strongly Agree=5

Code No	Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
<b>Idealized Influence</b>						
Idealized influence is defined as the leaders who inspire their followers by the result of his/her behavior.						
II1	I feel proud to work with my subordinates.	1	2	3	4	5
II2	I prioritize the collective interest over personal interest of subordinate.	1	2	3	4	5
II3	I work in such a way that subordinates respect me.	1	2	3	4	5
II4	I show strength & courage in the work of my subordinates.	1	2	3	4	5
II5	I talk to subordinate about his/her most important values & beliefs..	1	2	3	4	5
II6	I especially realize the importance of a purpose.	1	2	3	4	5
II7	I think about the moral consequences before making a decision.	1	2	3	4	5
II8	I emphasize the importance of collectively specified goals of the school.	1	2	3	4	5
<b>Inspirational Motivation</b>						
The ability of a leader to inspire her or his followers for the sense of purpose and bring confidence and motivation.						
IM1	I am optimistic about the future of subordinates & communicate with them.	1	2	3	4	5
IM2	I communicate enthusiastically with subordinates when they need to do something.	1	2	3	4	5
IM3	I clearly express him/her sightedness.	1	2	3	4	5
IM4	I assure my subordinates that their goal will be achieved.	1	2	3	4	5
<b>Intellectual Stimulation</b>						
An intellectual stimulation is that the leader who are able to provide an environment for followers to motivate, think and be creative.						

IS1	I examine the merits & demerits of the various accepted questions.	1	2	3	4	5
IS2	I seek a different approach while solving a problem.	1	2	3	4	5
IS3	I want subordinates to look a problem from different angles.	1	2	3	4	5
IS4	I suggest subordinates to do the work in a different way.	1	2	3	4	5
<b>Individualized Consideration</b>						
An Individualized consideration in which a leader consider each followers needs, ideas and suggestions.						
IC1	I spend time to teach & train the subordinates.	1	2	3	4	5
IC2	I treat teachers & staff not only as members of the school but also as individuals.	1	2	3	4	5
IC3	I consider the fact that every person has different needs abilities & desires.	1	2	3	4	5
IC4	I help subordinates to develop strengths.	1	2	3	4	5

**Transactional Leadership Style:** It is a style of leadership where the leader built relationship with followers. In this leadership style leader encourages his/her subordinates and rewards on success and punishment on failures.

<b>Contingent Reward</b>						
Rewards given by the head to his/her subordinate on the completion of a given task positively.						
CR1	I assist teachers & staff to their hard work & effort.	1	2	3	4	5
CR2	I focus on who is responsible for achieving the goals of the task.	1	2	3	4	5
CR3	I explain what happens when my subordinates achieve their goal.	1	2	3	4	5
CR4	I am satisfied if they achieve the expected achievement.	1	2	3	4	5
CR5	I focus on any irregularities, mistakes or deviations in the performance level of any teaching staffs.	1	2	3	4	5
CR6	I focus on resolving staff grievances or dissatisfaction.	1	2	3	4	5
CR7	I monitor the mistakes & weaknesses of staff & teachers.	1	2	3	4	5
CR8	I focus on any teachers/staff member who are failing to reach the required performance level.	1	2	3	4	5

### **Management by Exception**

To inspire followers, provide them a positive vision and observing overall performance in the organization.

ME1	I do not interfere in the work of the teachers/staff unless there is a serious issue.	1	2	3	4	5
ME2	I wait until subordinates make a mistake before taking action.	1	2	3	4	5
ME3	I believe that there is no need to improve unless something goes wrong.	1	2	3	4	5
ME4	I am demonstrating that only acts when problem reaches a critical stage.	1	2	3	4	5

**Thank you for your feedback**



**Shah Hussain** 3/9/2021

to heppnerp ▾



Respected Professor hope you are doing well. I want your permission of problem solving inventory developed by you. Dear professor without your permission I can't use it and without the use of PSI I am unable to do my research. I am going to conduct my research on the topic of "Analysis of problem solving skills among head teachers with transactional or transformational leadership styles at primary school level". I will be thankful for you.

Shah Hussain

M.Phil Education

National University of Modern Languages Islamabad  
Pakistan.



**Heppner, Puncky** 3/23/2021

to me ▾



Shan, you have my permission to use the PSI in your research.

Let me know if you need anything else from me, such as the PSI inventory, scoring instructions, etc.

All the best with your research,

Puncky Heppner







Dr. Jiban Khadka 3/9/2021



to me ▾

Dear Hussain ji,  
Please, find the attachment that is allowed to use for  
your research purpose.  
regards

.....  
.....

**Dr. Jiban Khadka**

**Program Coordinator**

**Faculty of Social Sciences and Education (FOSEd)**

**Nepal Open University**

**Manbhawan, Lalitpur**

**9841463057 | 01- 5524108**



DEPARTMENT OF EDUCATION  
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Sector H-9, Islamabad  
Tel.No: 051-9265100 Ext: 2090

ML1-3/2020-Edu/2021

Dated: 23-08-2021

**WHOM SO EVER IT MAY CONCERN**

Mr. Shah Hussain S/O Muhammad Shafiq, students of M.Phil (Edu) Department of Education National University of Modern Languages is engaged in project of Research Work.

He may please be allowed to visit your Institution / Library to obtain the required information for his Research Work.

This information shall not be divulged to any unauthorized person or agency. It shall be kept confidential.



*Wajida Shahid*  
23/8/21  
Dr Wajida Shahid  
Head,  
Department of Education.

Cover letter for Questionnaire

**Analysis of Problem Solving Skills among Head Teachers with  
Transactional or Transformational Leadership Styles at Primary School  
Level**



Dear respondent,

I am taking a research on the topic "Analysis of problem solving skills among head teachers with transactional or transformational leadership styles at primary school level". It is requested to please response the following statements carefully which will be used for research purpose only. Please provide all demographic information and answer the statements on scale from 1 to 5, strongly disagree to strongly agree.

Shah Hussain

M. Phil Education

NUML Islamabad

**Letter of Request for Tool Validation**



**Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level**

**Subject: Request for Validity Certificate**

Respected Sir/ Madam,

I am conducting a research study on "Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level" as it is required for my M.Phil. degree. The tool related Problem Solving Skills have been adopted and tool for Transactional and Transformational leadership styles adapted by the scholar towards his thesis.

Kindly check the questionnaires, their content, construction, and provide some valuable suggestions. Kindly certify tool validity by filling the certificate attached at the end of the questionnaire.

Shah Hussian  
M.Phil (Education)  
NUML Islamabad

Certificate for Tool Validation



**Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level**

By Mr. Shah Hussain

M.Phil. scholar, Faculty of Social Sciences, National University of Modern Languages  
Islamabad, Pakistan

This is to certify that questionnaires adopted and adapted by scholar towards his thesis have been assessed and found appropriate for the data collection process. All the items in the tools are meeting the objectives and addressing the research questions and research hypotheses. Face and content validity are also assured, and can be used by the researcher for the data collection process.

Validated by: Dr Samiul Haq

Designation: A.P

Institute: SBB University Sheringal  
Dir Upper

Date of validation: 3 8 2021

HOD -  
Department of Islamic Study  
SBBU Sheringal Dir Upper

## Appendix H

### Certificate for Tool Validation



#### **Analysis of Problem Solving Skills among Head Teachers with Transactional or Transformational Leadership Styles at Primary School Level**

By Mr. Shah Hussain

M.Phil. scholar, Faculty of Social Sciences, National University of Modern Languages  
Islamabad, Pakistan

This is to certify that questionnaires adopted and adapted by scholar towards his thesis have been assessed and founded appropriate for the data collection process. All the items in the tools are meeting the objectives and addressing the research questions and research hypotheses. Face and content validity are also assured, and can be used by the researcher for the data collection process.

Validated by: Dr. Abdul Haq

Designation: A/P

Institute: SBBU Sheringal Dir. Upper

Date of validation: 03-08-2021

AP  
Department of Islamic Studies  
SBBU Sheringal Dir. Upper

Certificate for Tool Validation



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Validated by: \_\_\_\_\_

Designation: \_\_\_\_\_

Institute: \_\_\_\_\_

Date of validation: \_\_\_\_\_

*Dr. Muhammad Munir Kayani.*  
*12/09/2021*  
*Associate Professor*  
*NUU*  
*12/09/2021*

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Validated by: Dr. Jameela Ashraf 09/08/21

Designation: lecturer

Institute: NUML

Date of validation: 09/08/2021



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Validated by: Dr. Farhana Tabassum

Designation: Assistant Prof

Institute: NUML Islamabad

Date of validation: 23-8-21



CERTIFICATE OF PROOF READING

Analysis of problem solving skills among head teachers with transactional or transformational leadership style at primary school level

By

Shah Hussain

National University of Modern Languages

It is certified that the research work with the title "Analysis of problem solving skills among head teachers with transactional or transformational leadership style at primary school level" conducted by Shah Hussain has been checked and proofread for the language and grammatical mistakes.

Name Ihtisham-UL-Haq  
Designation Lecturer in English  
Institute GPGC Timergava Div (L)  
Signature Sham  
Date 15/03/2023

Lecturer in English  
GPGC Timergava Div (L)

## Appendix M

### List of Population

S.#	School Name	S.#	School Name
1	IMSB (I-X) Dhaliala	129	IMSB (I-V) Pind Bagwal
2	IMSB (I-X) Banni Saran	130	IMSB (I-V) Rawal Dam
3	IMSB (I-X) Gagri	131	IMSB (I-V) Ramli
4	IMSB (I-V) Sihala	132	IMSB (I-VIII) Satra Meel
5	IMSB (I-V) Bhimber Trar	133	IMSB (I-V) Sihali
6	IMSB (I-V) Lohi Bher	134	IMSB (I-V) Kot Hathail
7	IMSB (I-VIII) Ara Burji	135	IMSB (I-V) Gokina
8	IMSB (I-V) Humak	136	IMSB (I-V) Guri
9	IMSB (I-V) Chak Kamdar	137	IMSB (I-VIII) Chatar Bakhtawar
10	IMSB (I-V) Mohra Kalu	138	IMSG (I-X) Gokina
11	IMSB (I-VII) S/Mirzain	139	IMSG (I-X) Kuri
12	IMSB (I-V) Kortana	140	IMSG (I-X) Phulgran
13	IMSB (I-V) Chak	141	IMSG (I-X) Rawal Town
14	IMSB (I-VIII) Koral	142	IMSG (I-X) Talhar
15	IMSB (I-V) Rajwal	143	IMSG (I-X) Lakhwal
16	IMSB (I-V) D/Mai Nawab	144	IMSG (I-X) Noor Pur Shahan
17	IMSB (I-V) Pind Malkan	145	IMSG (I-X) Shadra Kurd
18	IMSB (I-V) Boora Banhial	146	IMSG (I-VIII) Shadra Kalan
19	IMSB (I-V) Darwala	147	IMSG (I-VIII) Bain Nala
20	IMSB (I-VIII) Herdogher	148	IMSG (I-X) Said Pur
21	IMSB (I-V) Mughal	149	IMSG (I-X) Malot
22	IMSB (I-V) Bhangril	150	IMSG (I-VIII) Mandala
23	IMSB (I-V) Mohri Rawat	151	IMSG (I-VIII) Mohra Noor
24	IMSB (I-VIII) Nara Syedan	152	IMSG (I-X) NHC
25	IMSB (I-V) Sigga	153	IMSG (I-V) Athal
26	IMSG (I-X) Humak	154	IMSG (I-VIII) Bhara Khu
27	IMSG (I-X) Nara Syedan	155	IMSG (I-VIII) Bobri
28	IMSG (I-X) Dhoke Gangal	156	IMSG (I-V)NHC Chak Chak Shahzad
29	IMSG (I-VIII) Mohri Rawat	157	IMSG (I-V) Dhoke Jerrani
30	IMSG (I-X) Gagri	158	IMSG (I-VIII) kot Hathial
31	IMSG (I-X) Upran Gohra	159	IMSG (I-V) Shahzad Town
32	IMSG (I-VIII) Bhimber Trar	160	IMSG (I-VIII) Mohrian
33	IMSG (I-X) R/Col Rawat	161	IMSG (I-V) Pind Bagwal
34	IMSG (I-X) Dhaliala	162	IMSG (I-VIII) Sanjalian
35	IMSG (I-VIII) PTC Sihala	163	IMSG (I-V) Shah Pur
36	IMSG (I-VIII) Rajwal	164	IMSG (I-V) Subban
37	IMSG (I-V) Mohri Mughal	165	IMSG (I-V) Bhara Khu (N.A)
38	IMSG (I-V) Mughal	166	IMSG (I-V) Mal Pur
39	IMSG (I-VIII) Miana Thub	167	IMSG (I-V) Maira Mal Pur

40	IMSG (I-V) Ladhiot	168	IMS (I-V) NO 1. G 9/3
41	IMSG (I-V) Ghora Mast	169	IMS (I-V) NO 2. G 9/3
42	IMSG (I-V) Pindori Syedan	170	IMS (I-V) NO 3. G 9/3
43	IMSG (I-VIII) Peija	171	IMS (I-V) NO 1. G 9/4
44	IMSG (I-V) Boora Bangial	172	IMS (I-V) NO 2. G 9/4
45	IMSG (I-VIII) Jandala	173	IMS (I-X) G 9/1
46	IMSG (I-V) G/ Syedan	174	IMS (I-V) NO 1. G 9/2
47	IMSG (I-V) Herdogher	175	IMS (I-V) NO 2. G 9/2
48	IMSG (I-V) Hoon Dhamial	176	IMS (I-V) NO 3. G 9/2
49	IMSG (I-V) Sihala	177	IMS (I-V) NO 4. G 9/2
50	IMSG (I-V) Sihala Mirzain	178	IMS (I-V) G 9/1
51	IMSG (I-VIII) Niazian	179	IMSG (I-X) G 11/2
52	IMSG (I-V) Humak	180	IMS (I-V) G 10/1
53	IMSG (I-V) (M T) Humak	181	IMS (I-V) G 10/4
54	IMSG (I-VIII) Bhangril	182	IMS (I-V) G 11/1
55	IMSG (I-V) Rawat	183	IMS (I-V) G 11/2
56	IMSG (I-V) Skiekhpur	184	IMS (I-V) G 10/3
57	IMSG (I-V) PWD Col	185	IMS (I-V) F 10/1
58	IMSG (I-V) Sihala Khurd	186	IMS (I-V) F 10/2
59	IMSG (I-V) CBR Colony	187	IMS (I-V) F 10/4
60	IMSG (I-V) Soan Garden	188	IMS (I-V) NO 1 G 10/2
61	IMSB (I-X) Naugazi	189	IMS (I-V) NO 2 G 10/2
62	IMSB (I-X) I 14	190	IMSG (I-X) G 10/3
63	IMSB (I-X) Maira Akku	191	IMSG (I-VIII) I 9/4
64	IMSB (I-X) Bhadana Kalan	192	IMSG (I-VIII) I 8/1
65	IMSB (I-X) Miara Beri	193	IMS (I-V) I 8/1
66	IMSB (I-VIII) Dhoke Jouri	194	IMS (I-V) NO 1 I 9/4
67	IMSB (I-VIII) Dhoke Paracha	195	IMS (I-V) NO 2 I 9/4
68	IMSB (I-VIII) Dhoke Chellow	196	IMS (I-V) AIOU Colony
69	IMSB (I-V) Tarnol	197	IMSG (I-VIII) I 10/4
70	IMSB (I-V) Tammam	198	IMS (I-V) NO 1 I 10/1
71	IMSB (I-V) Sangjani	199	IMS (I-V) NO 2 I 10/1
72	IMSB (I-V) Dora	200	IMS (I-V) I 10/2
73	IMSB (I-V) Shkiekhpur Noon	201	IMS (I-V) NO 1 I 9/1
74	IMSB (I-V) Pindhoon	202	IMS (I-V) NO 2 I 9/1
75	IMSB (I-V) Noon	203	IMSB (I-X) Khanna Dhak
76	IMSB (I-V) Shah Allah Ditta	204	IMSB (I-X) Tumair
77	IMSB (I-V) Karamabad	205	IMSB (I-X) Jagiot
78	IMSB (I-V) Dhoke Lubana	206	IMSB (I-X) KH Nai Abadi
79	IMSB (I-V) Johd	207	IMSB (I-X) Thanda Pani
80	IMSB (I-V) Saria Kharbuza	208	IMSB (I-X) Kirpa
81	IMSB (I-V) Pind Parian	209	IMSB (I-VIII) Ali Pur
82	IMSB (I-V) Dhreak Mohri	210	IMSB (I-VIII) Della
83	IMSB (I-V) Seri Saral	211	IMSB (I-VIII) Pehount
84	IMSB (I-V) Bokra	212	IMSB (I-VIII) Kijnah

85	IMSB (I-V) Jhangi Syedan	213	IMSB (I-V) Sohan
86	IMSB (I-V) Gholra	214	IMSB (I-V) Sharifabad
87	IMSB (I-V) Chahan Mastal	215	IMSB (I-V) Khadrappar
88	IMCG (I-VIII) Shah Allah Ditta	216	IMSB (I-V) Chirah
89	IMSG (I-X) Sangjani	217	IMSB (I-V) Mohara Solina
90	IMSG (I-X) Jhang Syedan	218	IMSB (I-V) Jhang syden
91	IMSG (I-X) Naughazi	219	IMSB (I-V) C.H Bahgial
92	IMSG (I-X) Badia Qadir Bukhsh	220	IMSB (I-V) Tarlai
93	IMSG (I-X) Maria Beri	221	IMSB (I-V) Mohara
94	IMSG (I-VIII) Dhoke Jouri	222	IMSB (I-V) Ara
95	IMSG (I-VIII) Pind Paracha	223	IMSB (I-V) Khanna kak
96	IMSG (I-VIII) Noon	224	IMSB (I-V) Biath
97	IMSG (I-VIII) Dhreak Mohri	225	IMSB (I-V) Pind Mistran
98	IMSG (I-VIII) Dhoke Paracha	226	IMSB (I-V) Nilore
99	IMSG (I-VIII) Saria Kharbuza	227	IMSB (I-V) Sirri
100	IMSG (I-V) Bheka Syedan	228	IMSG (I-X) Jaba Talai
101	IMSG (I-V) Pind Parian	229	IMSG (I-X) New Shakrial
102	IMSG (I-V) Sheikhpur Noon	230	IMSG (I-X) Darkala
103	IMSG (I-V) Dhoke Hasu	231	IMSG (I-VIII) K H Dak
104	IMSG (I-V) Dhoke Suleman	232	IMSG (I-VIII) Sohan
105	IMSG (I-V) Saria Madhu	233	IMSG (I-VIII) Kalia
106	IMSG (I-V) I-14/3	234	IMSG (I-VIII) Kijnah
107	IMSG (I-V) D-17	235	IMSG (I-V) Shakrial
108	IMSB (I-X) Bhara Kau	236	IMSG (I-V) Khanna Nai Abadi
109	IMSB (I-X) Chattar	237	IMSG (I-V) No 1 Tarlai
110	IMSB (I-X) Shadra	238	IMSG (I-V) No 2 Tarlai
111	IMSB (I-X) Talhar	239	IMSG (I-V) Tamma
112	IMSB (I-VIII) Bobri	240	IMSG (I-V) Ali Pur MV
113	IMSB (I-VIII) Jandala	241	IMSG (I-V) Ali Pur Frash
114	IMSB (I-X) Maria Bagwal	242	IMSG (I-V) Severa
115	IMSB (I-VIII) Mohra Noor	243	IMSG (I-V) Chounial Bangial
116	IMSB (I-V) Atal	244	IMSG (I-V) Herno
117	IMSB (I-V) Chan Mastal	245	IMSG (I-V) Dhok Fathall
118	IMSB (I-V) Dohke Jerrani	246	IMSG (I-V) Tumiar
119	IMSB (I-V) Dhoke Syedan	247	IMSG (I-V) Chirah
120	IMSB (I-V) Dhola Syedan	248	IMSG (I-V) Kalia
121	IMSB (I-V) Kalran	249	IMSG (I-V) Jhang Syden
122	IMSB (I-VIII) Kot Hatyal N.A	250	IMSG (I-V) Chappar
123	IMSB (I-V) Malot	251	IMSG (I-V) Chakhtan
124	IMSB (I-V) Malwar	252	IMSG (I-V) Nilore
125	IMSB (I-V) Mangial	253	IMSG (I-V) Punjgran
126	IMSB (I-V) Mall	245	IMSG (I-V) Ali Pur South
127	IMSB (I-V) Noor Pur Shahan	255	IMSG (I-V) Frash Town
128	IMSB (I-V) Palali	256	IMSG (I-V) Simly Dam