EFFECT OF LEADERSHIP BEHAVIOUR AND SCHOOL ORGANIZATIONAL HEALTH ON STUDENTS’ ACHIEVEMENT

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IAT
Effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement

Abstract

The purpose of this study is to find out the effect of Leadership Behavior of principals on Students’ Academic Achievement on the basis of gender and type of schools. The present study also compares the effect of leadership behaviour of principals on students’ academic achievement as described by themselves and as described by the teachers. Moreover, this study is aimed to find the effect of School Organizational Health on Students’ Academic Achievement. Furthermore, School Organizational Health has been compared on the basis of type of schools, gender, and science and arts groups. The study falls in positivism paradigm and accordingly quantitative approach has been adopted to conduct the study. The sample comprised on 64 principals, 128 teachers and 1920 students that is selected from four districts of the Punjab province, Pakistan. From selected sample, data were collected through two research tools. First research tool has two versions: ‘Leadership Practices Inventory Self (LPI-Self)’ and ‘Leadership Practices Inventory Observer (LPI-Observer)’. Leadership Practices Inventory Self was administered on principals and Leadership Practices Inventory Observer was administered on teachers. School organizational health has been measured through Organizational Health Inventory (OHI) and it was administered on students. Students’ Academic Achievement was calculated through 10th grade students’ marks obtained in Board of Intermediate and Secondary Education Punjab annual examination 2013. Collected data were analyzed by using SPSS. Pearson Coefficient Correlation was applied to find out the correlation between Leadership Behaviour and Students’ Academic Achievement. The same was applied to find out the
correlation between School Organizational Health and Students’ Academic Achievement. Moreover, Linear Regression analysis was applied to find out the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement. The same was used to measure the effect of subscales of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement. Finally, $t$ test technique along with descriptive statistics (mean and standard deviation) were used to describe the variables of the study.

Findings of the study are ‘that Leadership Behaviour of principals directly has no effect on Students’ Academic Achievement but there is a very poor correlation between both of them’. According to the teachers who served as observers, no significant correlation has been found between principals’ Leadership Behaviour and Students’ Academic Achievement. Moreover, according to the opinion of teachers there is no direct and overall effect of Leadership Behaviour on Students’ Academic Achievement. However, Enable Others to Act, a subscale of Leadership Behaviour has a significant effect on Students’ Academic Achievement. Moreover, no significant difference occurs between public and private school principals’ Leadership Behaviour; and Leadership Behaviour of male and female principals was not significantly different from each other as well.

Overall effect of School Organizational Health on Students’ Academic Achievement was found significant. Four out of five subscales of School Organizational Health that are ‘Collegial Leadership, Resource Influence, Teacher Affiliation and Academic Emphasis’ have a significant effect on Students’ Academic Achievement. According to the opinion of students, there is no significant difference in School Organizational Health of public and private schools. However, there is significant difference in School Organizational Health, according to the opinions of male
and female students. Moreover, there is significant difference in School Organizational Health according to science and arts group students’ opinion.

As the results indicate the strong relationship between organizational health and students’ academic achievement; it is therefore suggested that policy maker institutions such as Education Department and Ministry of Education should offer professional training for school heads and teachers to enhance their skills to improve the school health that may ultimately enhance the students’ academic achievement. The results highlight the highest effect of an aspect of organizational health ‘Enable Others to Act’ and one facet of leadership behaviour ‘Collegial Leadership on Students’ Academic Achievement; therefore, it is suggested for practitioners (who are school heads in the present case) to shape the ‘School Health’ by giving due priority to these two components in order to enhance the students’ achievement.

Such studies might be conducted in the Punjab and other provinces so that based upon the findings of these a comprehensive guidelines for Leadership Behaviour and School Organizational Health can be defined, which may facilitate better decision making and developing positive organizational culture to enhance the outcomes of secondary schools in Pakistan.
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CHAPTER I

Introduction

Prevailing political, social and economic shifts in the environment in which schools are located, as well as significant changes in the education structure itself, such as the way educational institutions are managed; demand that school leaders need to be well developed to meet the challenges of the twenty first century (Northouse, 2010). Moreover, increased competition, technological advancements, the global demands of a professional workforce and the diverse needs of students are just a few indicators of why school leaders need to be efficient and to continually foster development to enable their schools to be sustained within a challenging environment in an era of globalization (Bono and Judge, 2003; House and Javidan, 2004).

There are several central forces within the continually changing educational situation in which school leaders operate, such as school demographics, multifarious governance structures, accountability frameworks and the professionalization of teaching, that demand the use of informed leaders to cope with the challenges of the changing situation (Murphy, 2002). These educational perspectives are now more complex, dynamic and fluid than ever before, suggesting various scenarios that could affect the ways in which leaders perform their roles and deal with problems challenging them. Hanna and Latchem (2001) conclude that an increasingly uncertain, fast-paced and competitive environment is forcing change upon schools, and that leaders need to focus on their leadership behavior to excel.

Research has consistently acknowledged and emphasized the critical role played by educational leaders in improvements of the performance of institutions, individuals and students (Al-Omari, 2008; Dimmock, 2003; Simkins, Sisum & Memon, 2003). Regarding the significance of leadership in educational institutions, Simkins (2005:9) argues that “Leadership is
one of the major factors or sometimes it seems the only factor that will determine whether an educational organization, be it a school, a college or a university, will succeed or fail”. This generally accepted notion is supported by significant initiatives undertaken for the development of educational leadership (Bush and Middlewood, 2005).

Bush (2003) argues that leadership has no agreed definition and every author defined leadership in its own way. Leadership researchers, after exploring this concept from different perspectives, highlight that it is a multifaceted and complicated ‘process’ (Northouse, 2010). Similarly, many of the definitions perceive leadership as a process by means of which a leader influences the students’ performance (Davies, Hides & Casey, 2001; Northouse, 2010). Educational leadership is a multi-dimensional field, scholars and practitioners in this area are positioned in different groups in the organizations and divisions. Leadership is undoubtedly one of the most studied areas in the behavioural sciences. Still, the concepts of leadership theory have eluded administrators like a haunting melody. Probably more has been written and less is known about leadership than about any other topic in behavioural sciences.

According to Yukl (2002), the term leadership itself projects images of powerful, dynamic individuals who command victorious armies, build wealthy and influential empires, or alter the course of nations. Stated succinctly, people commonly believe that leaders make a difference and want to understand why. Bass (1990) states that leadership is often regarded as the single most important factor in the success or failure of institutions. Ogawa and Scribner (2002) defined the leadership as a wide, diverse, and a growing set of stakeholders which are known as leaders, and they are largely responsible for school performance.
Leadership is a process or property of an organization rather than of an individual. Ogawa and Bossert (1995) contend that leadership is a quality of school organizations, which flows broadly through social networks and roles. Smylie and Hart (1999) note empirical support for leadership as an organizational property of schools. Similarly, Diamond, Spillane & Halverson (2004) maintain that leadership is distributed across leaders, followers, and their situation.

As leadership is considered very significant for improvement for individuals and school performance, it has attracted the attention of researchers, theorists and educational institutions, where programmes in leadership studies have been started throughout the world. Some theorists conceptualize leadership as an attribute or behavior, whilst other researchers consider it the relational point of view (Northouse, 2010).

School leadership is crucial to creating an environment in which teaching and learning can take place, and for the same cause Pakistani public school educators have been facilitating students regarding their academic achievement. In Pakistan, thousands of education officers and principals are working to implement provisions of Education Sector Reforms for this purpose (Kronstadt, 2004). These reforms place demands on education officers, principals, and teachers to increase achievement of all students. Significant research has been conducted to recognize precise principal behaviours and leadership styles that impact academic achievement of the students. The concept of organizational health is similar to that of school climate. Hoy and Sabo (1998) define the organizational health as producing a picture of organizational behavior and individual behavior for managing and changing of behaviors.
Miles (1969) in an analysis of Organizational Health of Schools defined a healthy system as a framework of an open social system with fairly durable system properties. According to Hoy & Forsyth (1986) and Miles (1969) “Health of an organization focuses on factors that facilitate and impede the development of positive interpersonal relationships within an organization itself”. A healthy school is described as one in which harmonious relationships exist between individuals of all levels. Not only do healthy schools appear to be high-achieving (Hoy,Tarter & Kottkamp, 1991) but, school health is identified as an important variable related to school effectiveness (Hoy & Feldman, 1987).

Infact very little focus has been given on the relationship between principal leadership behavior and organizational health in terms of academic achievement of students. Primarily, it is accepted that principals with effective leadership behaviors certainly affect students’ academic achievement in broad-spectrum and organizational health in terms of learning environment as well (Waters & McNulty, 2004).

Leithwood (2003) holds that:

“Educational leaders must guide their schools through the challenges posed by an increasingly complex environment. Curriculum standards, achievement benchmarks, programmatic requirements, and other policy directives from many sources generate complicated and unpredictable requirements for schools. Principals must respond to increasing diversity in student characteristics, including cultural background and immigration status, income disparities, physical and mental disabilities, and variation in learning capacities”.

Principals need strong leadership skills to successfully lead the schools of the twenty-first century and address school improvement pressures. Current educational reform has focused a great on the influence of leadership behavior on school progress (Harris, 2005). Leithwood, Louis, Anderson & Wahlstrom (2004) argued the effective principal behavior in terms of
transformational and transactional leadership styles. They are of the view that, ‘influence of principal on teachers’ teamwork has an effect on the behavior of principals’ and teachers’ regarding school improvement’.

Students’ academic achievement is a constant challenge for public school educators. A review of the relevant literature reveals considerable research pertaining to specific leadership behaviors and leadership styles that impact academic achievement; it clearly demonstrates that principal’s leadership matters. The literature also suggests that principals’ leadership behaviors affect School Organizational Health and these features influence academic achievement. Organizational health provides a conceptual framework within which the relationships among principal and teacher behaviors and student achievement could be investigated.

The school’s organizational health and other school related characteristics like teachers’ gender, ethnicity, educational level, and years of experience play a vital role towards Students’ Academic Achievement. Since several of these characteristics have been targets of research and areas of priority for intervention and innovation, while the study at hand will examine the relationship between organizational health related characteristics and student achievement in schools. No doubt leaders in schools are making necessary improvements on teaching and learning in order to have positive effects on student achievement. Therefore, identifying and examining elements in schools that have a significant effect on student achievement in terms of behavior expressed by school leaders are critical in this investigation and for future implications. In spite of the fact that much research has been reported on leadership behavior, the impact that a leader have on Students’ Academic Achievement in current scenario still requires more attention of the researchers.
For the purpose of present study, leadership is also considered as a process and behavior through which school principals influence their faculty members in order to accomplish the common objectives of the school that is the school performance and is primarily reflected through Students’ Academic Achievement. Moreover, the present study dwells in the international literature to explore and theorize the interplay between leadership behavior and School Organizational Health with a focus on Students’ Academic Achievement as a result of their influences in public secondary schools of Pakistan. During the literature review the researcher discovered that leadership behavior was not as deeply described by others as was described by Kouses and Posner. Because the five dimensions like; Model the way, Inspire a shared vision, Challenge the process, Enable others to act, and Encourage the heart were not discussed earlier by the researchers.

Assessment of the role of leadership in creating and establishing organizational health is also prerequisite to see the link between leaders’ behavior and Students’ Academic Achievement. In Pakistani context it is necessary to conduct research in this regard that is why the researcher desires to explore different aspects of school leadership behavior at secondary level, and their relationship with organizational health and achievement of the students.

1.1 Statement of the Problem

The purpose of present study was to examine the effect of principals’ leadership behaviors and organizational health on Students’ Academic Achievement at secondary level. The scope of research also includes a gender based comparison of leadership behavior of school leaders as well as a comparison on the basis of disciplines i.e. arts and science group students’ perceptions about School Organizational Health. Moreover, a comparison on the basis of public and private sector is also included in the scope of this research.
1.2 Objectives of the Study

Objectives of the study were;

1. To explore the relationship between leadership behavior of secondary school principals, School Organizational Health and Students’ Academic Achievement.

2. To examine the effect of leadership behavior of principals on Students’ Academic Achievement according to the perceptions of principals.

3. To investigate the effect of leadership behavior of principals with reference to gender and type of school (public & private) on Students’ Academic Achievement.

4. To explore the effect of leadership behavior of principals on Students’ Academic Achievement, on the basis of gender and type of school according to the observation of the teachers.

5. To examine the effect of School Organizational Health on Students’ Academic Achievement.

6. To explore the relationship between School Organizational Health and Students’ Academic Achievement regarding public and private secondary schools.

1.3 Research Questions of the Study

On the basis of above mentioned objectives, following research questions were made;

1. Is there any relationship between leadership behavior of principals and Students’ Academic Achievement according to the perceptions of principals?

2. Is there any relationship between leadership behaviors of principals and Students’ Academic Achievement according to the perceptions of teachers?
3. Is there any relationship between subscales of leadership behavior of principals (Model the way, Inspired the shared vision, Challenge the process, Enable others to act, and Encourage the heart) and Students’ Academic Achievement?

4. Is there any relationship between leadership behavior of secondary school principals, School Organizational Health and Students’ Academic Achievement?

5. Is there any difference in principals’ leadership behavior on the basis of gender at secondary level?

6. Is there any difference in public and private secondary school principals’ leadership behavior?

7. Is there any difference in leadership behavior of secondary school principals as stated by themselves and as perceived by teachers?

8. Is there any difference in principals’ leadership behavior on the basis of gender as perceived by teachers?

9. Is there any difference in public and private secondary school principals’ leadership behavior as perceived by teachers?

10. Is there any effect of leadership behavior of secondary school principals and School Organizational Health on Students’ Academic Achievement according to perceptions of principals?

11. Is there any effect of subscales of leadership behaviour on Students’ Academic Achievement?

12. Is there any effect of leadership behavior of principals on Students’ Academic Achievement as perceived by themselves and as perceived by teachers?
13. Is there any relationship between School Organizational Health and Students’ Academic Achievement?

14. Is there any relationship between subscales of School Organizational Health (Institutional Integrity; Collegial Leadership; Resource Influence; Teacher Affiliation; and Academic Emphasis) and Students’ Academic Achievement?

15. Is there any effect of School Organizational Health on Students’ Academic Achievement?

16. Is there any difference in secondary schools’ Organizational Health on the basis of gender of the students?

17. Is there any difference in public and private schools’ Organizational Health?

18. Is there any difference in School Organizational Health on the basis of science and arts groups?

1.4 Conceptual Framework of the Study

The relationship between perceived leadership behaviors of the secondary school leaders and School Organizational Health with the Students’ Academic Achievement has been studied by the researchers like Hallinger and Heck (1998) who examined the relationship between leadership behavior and students achievement. This study is expected to identify the characteristics of school leadership which affects educational presentation of the students.

Adler and Borys (1996) examined a feature of school leadership performance that is unique by the degree to which school professional health, organizations, system, and channel are seen by teachers as assisting rather than holding up their work.

However, school leaders have been usually steady on resource distribution and process requirements. At present school leaders are involved in additional tasks related to student
achievement. Furthermore, they utilize the necessary skills to stimulate stakeholders and show the way to all those who are expert on student learning and achievements (Kearns, 1995). Thus, the influential behaviors of the school leaders can have an impact on student achievement. Leadership behaviors are the lines or activities of an individual or a group attention to smooth towards attaining a goal in a given condition (Hersey & Johnson, 1996).

There are a number of studies from a variety of contexts and settings which investigate the conceptual framework involving leadership behavior, organizational health and Students’ Academic Achievement to examine relationship between them; many of these studies reveal this relationship to be significant (Barth, 1990; Wilmore, 2002; Leithwood, 2003; Kouzes & Posner, 2007; Cox, 2005; Covey, 2005; Golman, 2006; Sheppard, 2007; Rowland, 2008; Hoy & Tarter, 1997; Waters, Marzano & McNulty, 2005).

As major variables of the study at hand are secondary schools principals’ leadership behavior, School Organizational Health and Students’ Academic Achievement. Therefore, design of the study is based on its major aim i.e. to find out the effect of principals’ leadership behavior on Students’ Academic Achievement alongside the effect of School Organizational Health and its factors. Leadership behavior consists of five subscales; Model the Way; Inspired the Shared Vision; Challenging the Process; Enabling Others to Act and Encouraging the Heart. Similarly, School Organizational Heath is comprised of five subscales; Institutional Integrity; Collegial Leadership; Resource Influence; Teachers affiliation and Academic Emphasis. Accordingly, Students’ Academic Achievement is actually the annual results declared by Board of Intermediate & Secondary Education. In the same fashion, demographics of secondary schools considered for this study are gender of principals, teachers and students, type of schools like public or private, discipline of the students i.e. arts and science groups.
The effect of leadership behavior and School Organizational Health on Students’ Academic Achievement has been explored independently and influence of leadership behavior on School Organizational Health is also examined. Moreover, relationship of demographic characteristics on Students’ Academic Achievement has been investigated. The same has been presented below in Figure 1.1

Figure 1.1 Conceptual Framework of the Study

Leadership Behavior of School Principals

- Model the way
- Inspired shared vision
- Challenge the process
- Enable others to act
- Encourage the heart

Demographic Characteristics (Gender, Type of School & Discipline of students i.e. Science and arts)

School Organizational Health

- Institutional Integrity (II)
- Collegial Leadership (CL)
- Resource Influence (RI)
- Teacher Affiliation (TA)
- Academic Emphasis (AE)

Students’ Academic Achievement

BISE – Board of Intermediate & Secondary Education
1.5 **Significance of the Study**

The major challenges of Education can be met with the adequate contribution of school leaders and organizational health in education. If we want to meet the needs of the future, then we have to put more emphasis on education. This study is expected to show whether any relationship exists between Leadership Behaviour and Organizational Health towards Students’ Academic Achievement in Pakistani context.

According to Shah (2010), Educational leaders should be persuasive to upgrade the educational standards. Researchers highlighted ineffective leadership along with many other reasons for the current situation of education in Pakistan (Iqbal, 2004). Yet there is general scarcity of research on Leadership Behaviour at school level in Pakistan. Limited research has been carried out in Pakistan in this field. No doubt there is also a substantial corpus of international literature in the area of educational leadership focusing on school context, but relevant literature on Leadership Behaviour and School Organizational Health is needed to be explored in Pakistani scenario.

Moreover, “little has been written about secondary schools leadership behavior and School Organizational Health with regard to the Students’ Academic Achievement (Inman, 2011). Furthermore, empirical research on leadership behavior and School Organizational Health in context of Students’ Academic Achievement is confined to the Western world rather than the developing world including Pakistan (Bush and Coleman, 2000; Dimmock, 2003; Simkins et al., 2003; Leithwood & Jantzi, 1999). In particular, the research conducted using leadership behavior and School Organizational Health approach is focused on the American context; thus, naturally the findings are rooted in the American
societal culture and belief system (Dimmock, 2000). Pakistan is an Islamic country situated in Southeast Asia and has its own norms, values and traditions, which make its cultural context significantly different from those of Western cultures. As Hofstede (2001) points out that cultural difference exist between Pakistan and Western world and demonstrates these cultural differences by highlighting that in the case of Pakistan ‘power distance’ has a high score and ‘individualism’ has a low score compared to the western world.

The literature suggests that culturally endorsed leadership behavior enhances the teachers working and as a result Students’ Academic Achievement is caused. Therefore, to understand and improve educational leadership practices in Pakistan, there is a need for leadership studies within the Pakistani culture and context. Last but not the least, this study will be helpful to explore the role of leadership in school effectiveness and Students’ Academic Achievement with respect to the stipulated indicators of School Organizational Health.

The study will be helpful for the Government, policy makers, care takers, teachers, donor agencies and school leaders for their better understanding of the behaviors adopted by the school leadership and its effect on Students’ Academic Achievement. Furthermore, this will be helpful for educational leaders to cope with the challenges of the present era with regards to uplifting and developing a school to be competitive and adoptive to the current changes of the times.
1.6 Assumptions of the Study

Following assumptions for the study were made;

1. The population of the study is normally distributed and respondents are expected to respond objectively.

2. Cooperative and collaborative leadership behaviors lead to better Students’ Academic Achievement.

3. Healthy organizational environment helps in good teaching.

4. Organizational health is an integral component of quality education system.

5. Good organizational health does not occur in a vacuum.

1.7 Delimitations of the Study

Delimitations of the study were as under;

1. The study was delimited to only English medium public and private secondary schools.

2. Private schools only affiliated with Boards of Intermediate & Secondary Education, and having total number of students not less than five hundred were included in the study.

3. Only those principals were selected who have been serving for the last two years in the same school from where teachers and students were selected.

4. Only those teachers who have been teaching 9th and 10th grades for the last two years were selected.

5. Only those students who are enrolled in the 9th grade in the beginning of the session and promoted to 10th grade were selected for this study.

6. Only senior teachers i.e. SSTs – secondary school teachers having graduation with at least B.Ed. were considered for LPI-O responses.
7. Those secondary schools having both academic disciplines i.e. science and arts were selected for the study.

1.8 Operational Definitions of the terms used in the study

Different terms used in the present study are defined as under;

1.8.1 Leadership Behaviour

Leadership behaviour is a process that encompasses Model the way, Inspire a shared vision, Challenge the process, Enable others to act, and Encourage the heart (Kouzes and Posner, 2003).

1.8.2 School Organizational Health

School organizational health is a relatively enduring quality of the school environment that is experienced by participants, affects their behavior, and is based on their collective perceptions of behavior in schools (Hoy & Miskel, 2013).

School organizational health is comprised of the characteristics where the institutional, administrative, and teacher levels are in harmony; and the school meets functional needs as it successfully copes with disruptive external forces and directs its energies toward its mission (Hoy, 2003; Hoy & Tarter, 1997).

1.8.3 Academic Achievement

The marks obtained by the students in their 10th grade examination conducted by the Board of Intermediate and Secondary Education of their respective regions.
1.8.4 Public Secondary Schools

The Secondary Schools (class 6th to class 10th) administered and supervised by the Government of Punjab, Pakistan.

1.8.5 Private Secondary Schools

The Secondary Schools registered with Punjab School Education Department and affiliated with Boards of Intermediate and Secondary Education.

1.8.6 Girls Schools

Schools consisting of only female students as well as female teachers only

1.8.7 Boys Schools

Schools consisting of male students and male teachers only
CHAPTER II

Literature Review

The literature review related to this study focuses on principal’s Leadership Behaviour, School Organizational Health, and the factors of Leadership Behaviour and Organizational Health. Because of the important role that principals play in student achievement, all facades of what principals do to promote student achievement have been reviewed. Moreover, how organizational health of the school with all of its factors affects the Students’ Academic Achievement has been reviewed also. Only principals at the secondary level have been focused in this study. Importance has been given on the basis of historical and the most recent findings of principals' behaviours, with attention given to the features like model the way, inspiration of collective vision, process of challenge, make possible others to perform, and persuade them, use to study Leadership Behaviour. Accordingly the factors of organizational health that are; institutional integrity, resource influence, collegial leadership, teacher affiliation, and scholastic emphasis have been focused while describing the School Organizational Health.

2.1 Leadership

Harris (2004) states that leadership has been an area of importance in organizations for many years. The importance of leadership has inflamed attention in the areas like education. A momentous quantity of research has been done to conclude the merits that make a successful and effectual leader. Preliminary studies of leadership focused on studying individuality of leaders in an endeavor to determine which traits and proficiencies let leaders to be successful. According to Bass (1990), there was a common belief that leaders were born and not made and these leaders had divergent traits and aptitudes that set them apart from others. On the other hand, Stogdill (1948) analyzed 124 trait studies of leadership from 1904 to 1947 and found personal factors
connected with leadership. These indicators were attainment, aptitude, participation, responsibility, and status. According to Hoy and Miskel (2005), Stogdill concluded that the attribute approach alone had produced insignificant results and therefore added a sixth factor, situational, associated with leadership. Mazzarella and Smith (1989) viewed leadership as both learned and partly inborn. Some researchers view leadership in terms of leader management, while others view leadership based on the character traits and functions of the leader.

As a result, attempts to find common characteristics of leadership were estimated unsuccessful. According to Bass & Riggio (2006), the theory that leaders are purely born to lead was not acknowledged. After determining that trait theories alone were not satisfactory, research began to focus on situational factors that could explain successful leaders. According to Avolio & Bass (1998), Situational Leadership theories created negotiations regarding the importance of the leader versus the importance of the situation. However, Hoy and Miskel (2005) revealed that only studying traits or situations is too narrow of an approach and will not come up with significant results.

Other researchers attempted to find out the universal characteristics of circumstances that were appropriately to the performance of leader. Hoy and Miskel (2005) stated that studies to establish effective Leadership Behaviour in the 1940’s at Ohio State University guided to the development of the well-known Leader Behaviour Description Questionnaire (LBDQ). Initiation structure and consideration are the two basic features of leader behaviour calculated with the LBDQ.

Yukl gave a statement in 2002 that the results of premature leadership studies should not be traditional as universal theories of effective Leadership Behaviour or understood to say that the same style of leader behaviour is efficient in all situations. Blake and Mouton conducted a
research in 1985 and they concluded that managerial grid is a leadership theory that advises the most successful leaders focus on initiation and people concern. Fiedler (1967) developed the first major theory for explicit emergency relationships in the study of leadership.

According to Fiedler's Contingency Model (1967) the effectiveness of leaders depends on both the merits and qualities of the leader and how optimistic the circumstances may be. In an exertion to determine leadership style, Fielder (1970) used the “Least Preferred Co-Worker” magnitude to determine the least description of workers. People who attained the highest on the scale were expected to be capable to work with tricky people.

2.2 Definition of Leadership

Leadership has numerous definitions. Leadership is the process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2004). Leadership is defined principally by the models, roles and behaviours which are used to describe it (Hallinger and Heck, 1998; Leithwood et al., 1999). Lambert (2003) writes that leadership is a "combination of breath of participation and depth of skill fullness”. Leadership and management also work to identify the important goals, motivate and enable others to devote themselves and necessary possessions to attainments (McGuire, 2001). School leaders are the people, engaging in a variety of roles in the school, which provide and exert influence and direction in accordance with accomplishment the school’s goals (Leithwood & Riehl, 2003). An educational or managerial leader is a person whose performance is deliberately and purposely geared to pressuring the school’s crucial focus and eventually the student’s realization (Witziers, Bosker, & Kruger, 2003).

Leadership is the vision and direction of the school principals that filters down to the teachers and into the classrooms where the students are being taught. As change filters through
the school, students are exposed to the blueprint of initiatives that promote student achievement. In sum, leadership, then, is a process of influence with intentions of enabling groups and individuals to achieve goals or objectives.

“Rost (1991) analyzed a total of 587 works that referred to leadership and found that 366 of them did not specify a definition of leadership. From the analysis, Rost found that most leadership literature focused on leader ability, traits or behaviors” (p.16).

2.3 Importance of Leadership

According to the research of Waters, Marzano, and McNulty (2004) there is a connection between successful school leadership, school atmosphere, quality education, and student achievement. According to Daugherty, Kelley, and Thornton (2005) improved student routine is significantly dependent on school leadership. “The behaviours of building level principals are linked to the climate of school buildings-effective leadership is critical” (Daugherty, Kelley &Thornton, 2005, p.19). The importance of school leadership permits research in to effective leadership exercises. Sergiovanni(2001) concluded leadership effectiveness as “achieving high levels of pedagogical thoughtfulness, developing relationships characterized by caring and civility, and achieving increases in the quality of student performance on both conventional and alternative assessments” (p.204).

In schools, it is the role of the leader to certify that all students are learning. Principals must create ideal circumstances for teachers so that they are up to the important task of inculcating students. School leadership involves on-going supervising, evaluation, collaboration; instructional guidance, high potential, announcement, as well as ensuring that teacher provide the necessary equipment. Darling-Hammond (2007) assured that leaders need to be brilliant and talented in order to profile and maintain strong teaching. They require being
exceptional to increase institutes to sustain deep knowledge for beginner as well as scholar. In order to be strapping instructional leaders, principals must be aware of the potency of their schools as well as the needs.

Kelley, Thornton, & Daughtery (2005) concluded “Skilled leaders correctly envision future needs and empower others to share and implement that vision” (p.17), The difficulty of effective leadership chains a focus on research to scrutinize these behaviours and determine if these magnitude are inbuilt, or learned, and how they can best be calculated. According to Petrie, Lindauer, and Tountasakis (2000), “good leaders in any field are not born, but are developed over time through hundreds, even thousands, of experiences dating from early childhood” (p. 355). Effective school leaders take the time to examine their experiences to develop their leadership preparations. The better leaders know their own leader behaviours and needs, the better they can understand and better they can lead others. When looking at leadership theories and styles, research discloses that effective leaders are capable to change from one model to another supported on the circumstances.

“The best leaders don’t know just one style of leadership; they are skilled at several and have the flexibility to switch between styles as the circumstances dictate” (Goleman, 2000, p.78). Successful school leaders should be capable to lead clique and administer their many everyday jobs. School leaders should be able to accomplish soaring goals by working through others in the school. According to Hoerr (2005), “Leadership is not just about their vision, intellect, and skills. Effective leadership is characterized by the leader’s ability to make others better, to help them grow, to support and challenge, and to learn from and with them” (p. 191). Efficient school leaders enlarge these skills and understand that their usefulness is determined
by their affiliation with staff, students, parents, and community members. According to Kouzes and Posner (1995), management and leadership is “the art of mobilizing others to want to struggle for shared aspirations” (p.30).

2.3.1 Situational Leadership

Paul & Blanchard developed the Situational Leadership re-emerged with “The Situational Leadership Model” in 1988. Hersey, Blanchard & Johnson (1996), introduced that effective leaders are those who can change their leadership style depending on the place and them maturity of the followers. Hersey et al. (1996) described two major features of leadership as “task behaviour” and “relationship behaviour”. Task behaviour describes how a leader gives details of a duty such as what the followers are to do and how the task should be skilled. Relationship behaviour explains how well the leader provides emotional hold up to the followers as the task is being accepted out. In addition, to formative leadership style based on the situation, successful leaders must also be aware of their avidness or development level of the followers. The maturity of the group can broaden official of level to a high level of maturity.

“The Situational Leadership Theory” operates a model that shows the relationship of group adulthood to the opposite leader behaviours. The Situational Leadership Model consists of four types (telling, selling, participating, and delegating) that stand for the style to be used by the leader in a particular situation and a bell-shaped curved line signifying the maturity of the group that runs during the four leadership quadrants. According to this model, successful leaders are able to move around the web depending on the location and the maturity level of the supporters. Leaders with high mission and high relationship behaviours are considered to be extremely attractive leaders. Effective leaders are highly proficient in matching all four styles to the suitable situation. There is no one accurate leadership style although many leaders
usually utilize a favoured style (Hershey & Blanchard, 1988).

Leadership styles refer to the behavior of an individual who attempts to influence others (it’s a subscale of leadership behaviour) (Northouse, 2004). The four leadership styles include directing, coaching, supporting and delegating. Directing is a style that has high directive but low supportive behavior. Leaders operating in this quadrant give instructions on how goals are to be achieved and supervise them carefully. Coaching is an approach that has a high directive and supportive style. A leader with this leadership style is involved with subordinates by giving them encouragement and soliciting for input. The third approach is supporting. The supporting approach requires that the leader be high with support and low with directive behaviors when working with subordinates. Leaders allow subordinates control of decisions but remain available to facilitate problem solving. The final approach is delegating. Leaders operating in this leadership style have low support and directive. Northouse (2004) contends that a leader using this style "gives control to the subordinates and also refrains from intervening with unnecessary social support" (p 90).

Leadership is a highly complex concept to define, but most definitions focus on the exercise of influence (Leithwood and Jantzi, 1999), as the notion of efficient leadership has shifted from delegation and direction to collaboration and shared responsibilities (Crowther and Olsen, 2002). A recent concept about leadership has moved away from analyses of individual leaders either those in formal leadership roles or charismatic or informal leaders to “distributed leadership” (Gronn, 2002; Spillane et al., 2004). The term distributed leadership implies an advocacy for democratic leadership with a sharing of authority among principals, teachers and others stakeholders (Harris and Muijs, 2005).
According to Leithwood and Reihl (2005), leaders engage in three kinds of activities that promote achievement. The first is setting direction that includes, but not limited to, establishing a shared vision and fostering the acceptance of group goals. The second is changing the organization by strengthening the culture, modifying organizational processes and changing structures. Finally, leaders can develop people by offering intellectual stimulation and offering individual support. Teacher leaders may engage in any of these activities through adopting any of the leadership styles.

Robinson (2001) defines leadership style as the characteristic manner in which a person behaves in attempting to influence the actions or beliefs of others, particularly subordinates. There are three main eras which comprise leadership theory. The trait era of leadership is considered to be the period from the late 1800s to the mid-1940s. The trait theory attempted to identify specific physical, mental and personality characteristics associated with leadership success, and it relied on research, related in various traits, to certain success criteria. The trait theory is alive and well. Researchers (Bass, 1990) have seen resurgence in interest in the trait approach including studies on how traits influence leadership and play a role in determining leadership ability and effectiveness.

It is unequivocally clear that leaders are not like other people as Bass (1990) stated that individual factors of successful leadership could be classified into six groups: capacity, achievement, responsibility, participation, status and situation. The behavior era began in the late 1940s when researchers started to explore the idea that how a person acts determines that person’s leadership effectiveness because simply analyzing the leaders’ traits cannot provide enough information about leadership effectiveness. They examined behaviors and their impact on measures of effectiveness such as production and the satisfaction of followers.
2.3.2 Transformational Leadership

Transformational leadership was introduced by Burns (1978), he introduced that transactional leaders use rewards or penalties in an effort to induce supporters to perform efficiently moreover, transformational leadership involves building proficiency in others, working as a team and appreciating all followers (Avolio & Bass, 2002). Burns (1978) researched that the differences between transactional and transformational leadership are in the nature and purpose of goals. In Transactional Leadership, goals are more self-serving and convenient instead of being focused on the happiness and interests of the group. The target of Transformational Leadership is to work mutually as a group.

Transactional Leaders are not positive and wait until after problems take place before production with them. Transformational Leaders see things before they ensue and help followers work toward combined goals (Hoy & Miskel, 2005). Studies have determined on Transformational leadership and its relationship to school system.

Leithwood and Jantzi (1999) found that Transformational Leadership powerfully influenced organizational setting of schools, and reasonably influenced student commitment. According to Brower & Balch (2005), “Stakeholders of education will also benefit from a transformational perspective as the vision, mission, and the overall common good permeate decisions” (p.vii), Within crinkled pressure on school principals, transformational leadership is important so that the principals can move their supporters to higher ability levels and stimulate them to achieve beyond their probable. Transformational leadership permits principals to engage teacher’s hesitancy making and create an impression in which team work is cherished.
Sergiovanni (2006) conducted a research and find out that leaders are to be respected, they must show a commitment to the people who are functioning as a cluster to accomplish the objectives of the group. Head-Teachers work with teachers for the best interest of students therefore, it is important for principals to know themselves and others in an attempt to successfully achieve goals. Transformational leadership is described as leadership that grows and encourages a staff towards a common vision for the whole school (Coleman, 2003).

2.3.3 Contingency Theory of leadership

The era of contingency theory evolved in the 1960s when researchers began to believe that environmental variables played some role in leadership effectiveness. The focus of the contingency era was on the observed behavior of leaders and their followers in various situations, not on any inborn or developed ability or potential for leadership. In the light of contingency theory ‘situational leadership model’ was developed by Paul Hersey and Kenneth Blanchard in the late 1960s and they considered that a leader’s behavior is contingent upon variations in situations and that the leader should fit the leadership style to the demands of situations (Hersey & Blanchard, 1993).

2.3.4 Blake and Mouton’s Managerial Grid

The Managerial Grid is perhaps the most well-known model of managerial behavior that has been revised several times. The grid was designed to explain how leaders help an organization through concern for production and people. It involves the leader’s concern for production (results) and the leader’s concern for people.

Accomplishments of the organization’s task were represented by the concern for results, while interpersonal relations were represented by the concern for people. The Managerial Grid
was expressed on a nine-point scale, with 1 representing low concern and 9 representing a high concern. Based on the grid being a 9x9 grid, it would be possible to identify 81 leadership styles.

However, the Managerial Grid portrays five major leadership styles which include:

**Authority-Compliance** – This particular style is characterized by a high concern for production but a low concern for people. Communication by the leader is not emphasized to the subordinates except for giving directions regarding a task.

**Country Club Management** – This style was characterized by a low concern for production and a high concern for people. Leaders who demonstrated this style made sure that personal and social needs of the subordinates were met. When employed, this particular leadership creates a positive climate in which everyone can feel comfortable.

**Middle-of-the-Road Management (Balanced Leader)** – This style will seek to be equal between the organization and the people. Leaders who use this style will try to create a mixture between taking subordinates into account and emphasizing the work requirements.

**Impoverished Management** – This type of leader will have a low concern for production and people and is uninvolved and withdrawn.

**Team Management** – This particular leadership style integrates a high concern for production and people. A leader who demonstrates this particular style acts determined, clearly states priorities, enjoys working, is open minded and follows through.

### 2.4 Leadership Behaviour of School Principals

Lipham (1964) and Erickson (1967) re-evaluate the researches on behaviour of school principals. Whereas, Lipham determined the conclusions of the research analysis, Erickson was mainly concerned with mechanical issues. The concluding painted methodological weak points of the studies which were accessible in the trained magazine in educational government during
the 1964-1967 periods. Both researchers concluded that the popular of studies reviewed used opinion poll with imagine strength, which served as a principal mode of data gathering. Bridges (1982) used 322 investigate reports on school administrators published during the period of 1967-1980 for his re-examine and decided largely on methodological topics.

Three machinery of Halpin (1963) classic premise for research on principals’ Leadership Behaviour were used by Bridges to classify the body of experiential research on school representatives. The three constituents are the behaviour of the managers; the predecessor variables influence such behaviour, and conclusions, which at least reasonably could be attributable to the principal. In categorizing studies with approbation to outcomes, Bridges (1982) made distinction between those studies dealing with the impact which school controller have on school outcomes or students accomplishment.

In the administrators’ impact studies, researchers attempted to conclude whether representative made computable dissimilarity in schooling. As observed by Bridges (1982), researchers are far more likely to focal point on directorial health than executive achievement. In his words when considering the effect of school leaders: Organizational health refers to the extent to which the personnel remain intact as a group, and may be determined in terms of self-confidence, teamwork amongst group members working with one an additional (Halpin, 1966).

Hallinger and Heck (1998) pointed out that hypothetical and bureaucratic shifts (from positivist, to post-positivist, significant theory, and constructivist) taking place in the last ten years in the educational research arena did not have a larger blow on the studies of leaders establishment on school conclusions. The research on the connection between the two was mostly examined from a positivist suggestion and with a thoughtful dependence on quantitative method.
The concept of educational leadership style progressed with the passage of time, and accordingly the research of the blow of the school leader’s style on the school. Many of researchers performed experimental studies in an effort to determine, at the time when the design of instructional leadership became established, if the instructional leadership jobs, behaviours, and actions and activities practiced by school leaders may be connected with students’ accomplishments. The huge wave of research on instructional leadership happened in 1980s and 1990s as well.

Pitner’s (1988) association of representative did meta-analysis of forty studies on instructional leadership and students understandings published during 1980 to 1995. All studies re-examine were side vision a land non-experimental in panorama, natural history organization that researchers had restrained or no pressure on sovereign variables (Pitner, 1988).

The mainstream of the observed studies on school efficiency and instructional leadership have been carried out in the framework of the directing loosely attached educational system of domination in the U.S.A. Over the years modifications related to the presentation of the standards-based improvement movement stress the instructional management features of school leaders. Amongst few quantitative studies in the post-1995 age, one conducted by Louis et al., controlling for applicable principal and school setting types such as race or customs, socioeconomic rank, and sexual grouping, Louis, Kappa & Marks (1996) showed that effective leaders in high pricking schools worked productively to inspire professional disagreement, conversation and to create the networks of exchange that tied faculty together around common matters of instruction coaching and knowledge.

One of the most vital confronts for educational researchers is to identify assets of schools that make a real disproportion in academic achievement. While different 5 features of school
organizational categorically have a strong association with student achievement, former factors within the control of schools emerge to be more important than Coleman and his followers understood. Recent research, using better data and more complicated and complex statistical supports than Coleman (2003) and his companion’s accessible proves that numerous school belongings are as significant as school managerial health in clerical for academic victory (Goddard & Woolfolk, 2000), faculty trust in students (Bryk & Schneider, 2003).

Each and every of this category can be overstressed by the deeds of leaders and other school persons in charge, and each one provides an understandable focus for efforts to improve academic realization of students.

Hoy and colleagues (Hoy, Miskel, Tarter & Woolfolk 2005) have recommended that these metaphors may characterize the proportions of a solo covert create, which they identify educational highlighting. Academic achievement is important and academic highlighting is a shared vision in the middle of faculty that the faculty has the ability to help students attain, and that students can be private to cooperate with those in this activity in short, a school wide self-assurance that students will succeed rationally.

Even though a number of studies have examined the relationship between Leadership Behaviour and Students’ Academic Achievement, much less research has been concluded on the possible foundations of these school features (Hallinger & Heck, 1998). In particular, there is little quantitative confirmation that school leadership makes a difference in all the proportions of Leadership Behaviour with a special focus on intellectual importance. This study appears to recognize characteristics of school leadership which affect educational presentation of the students. Sooner than central point on transformational leadership or private leadership traits, the study scrutinizes a feature of school leadership performance that is original by the degree to
which school professional health, organizations, system, and channel are seen by teachers as assisting rather than holding up their work (Adler & Borys, 1996).

However educational leaders have traditionally determined on resource distribution and process requirements, today’s era leaders comprise additional tasks related to student achievement and the necessary skills to motivate and lead all people who authority student learning and achievements (Kearns, 1995). Thus, the influential behaviours of the school leader can have a collision on student accomplishment. Leadership Behaviours are the course or activities of an individual or group in pains toward attaining a goal in a given condition (Hersey & Johnson, 1996).

Leadership Behaviour has been defined as the capacity to create and communicate desired affairs that induces commitment among those working in the organization (Bennis, 1985). McEwan (2003:) says, "Leadership Behaviour is a driving force that reflects the highly effective principal’s image of the future, based on personal values, beliefs, and experiences". A principal’s strong focus on academics and the Leadership Behaviour that he or she has set for the school is paramount. The behaviour that the principal has for a school serves as a guide which gives direction brings comfort and stability in times of change, and most importantly inspires those to connect to the work needed to improve learning for the students and teachers. According to Kottler (1990) says without a sensible Leadership Behaviour, a transformation effort can easily dissolve into a list of confusing and incompatible projects that can take the organization in the wrong direction or nowhere at all.

The leader of a school possesses behaviour of what the school can become in those schools where student achievement is high. The principal’s focus on academics and the relationship with the subordinates to accept the vision as their own contributes to the success of
the students. An expression of the principal’s focus is the frequent emphasis that is placed on all the stakeholders who feel that student achievement is at the core of education.

Principals are effective leaders who facilitate the development of shared vision and can create desired changes within the school building. Effective leaders are able to create Leadership Behaviour of possibilities and according to Barth (1990), "There is no more important work than helping create and then employing an inspiring, useful Leadership Behaviour" (p.194).

Creating a vision is not an easy task. It requires close and careful attention to the beliefs, values and School Organizational Health. Sergiovanni (1990) explored that the heart of leadership has to do with what a person believes, values, dreams about, and is committed to the person’s personal behaviour. As the leader, the principal must understand the complexities of the school culture and be able to establish support which will work toward student achievement. The vision that the principal sets for the school serves as the beacon for the school's direction. Conley (1999) believes that the Leadership Behaviour acts as an internal compass, and Speck (1999) makes an argument that Leadership Behaviour or his or her vision is what separates the principals who are school leaders from those who are simply managers.

Leaders embrace the opportunity for leading with Leadership Behaviour because the vision is a powerful commitment to the future of the school. Studies have shown that leaders who have a particular Leadership Behaviour are able to foster student achievement.

2.5 The Role of Leadership

The role of leadership is to bring about change in students, change that occurs in knowledge, position, attitude, skills and activities. The responsibility of the head-teacher is to guarantee that students learn and to go in front and lead schools. Of course, leading schools is a complex work stated by Leithwood (2003). The school leader ensures student learning by
managing the operations, institutionalization and possessions for a safe, resourceful learning environment.

Moreover, the role of leadership in the age of accountability is supreme. The responsibilities of the principal as a leader are directed from the state and local level. Increased responsibilities, management, and the task of increasing student achievement describe focus on the function of leadership. The primary responsibility is to facilitate effective learning, evaluating and teaching with the overall assignment of increasing student achievement. Wilmore (2002) stated that the function of the principal evolved from the principal teacher as a master teacher who also concentrated to the inadequate duties required to keep the school organized and operating economically, to the principal as chief executive officer of the campus.

2.6 Leadership Challenge

Consideration of effective leadership requires considering the actual behaviours of successful leaders. Leaders must also look extremely within themselves to classify strengths and blemishes. (Kouzes & Posner, 2007) stated that the quest for leadership is first an inner quest to discover who you are. Nominal submission by leaders is not enough to convince growth that directs the leader to success. Kouzes and Posner (1983) stated that Leadership Challenge began after a research project by Jim. In 1987, Kouzes and Posner performed over 550 interviews which created thousands of leadership stories from a wide variety of administrators, leaders, and others in non-managerial locations.
2.7 Leadership Practices Inventory (LPI)

The Leadership Practices Inventory was used as a measurement index inventory instrument for assessing leadership behaviors. Research has revealed that there is a large degree of consistency about behaviors of effective leaders (Kouzes & Posner, 2002a). The LPI was first developed in 1998 and it has two components: the LPI-Observer and the LPI-Self. After analysis of above components contains five best rehearsals used by the leaders:

1) Modelling the way
2) Inspiring a shared vision
3) Challenging the process
4) Enabling others to act
5) Encouraging the spirit

These all five subscales are elaborated in the Figure 2.1 below;

Figure 2.1 Five Subscales of Leadership Behaviour of Principals
After wide-ranging studies in various settings that incorporated thousands of case studies, and interviews, Kouzes and Posner developed a quantitative instrument, the Leadership Practices Inventory (LPI) (Kouzes & Posner, 2002b). These actions were explained in to 30 behaviour announcements that were based on conducted research and constant with personal success stories shared by the leaders. Leaders (LPI–Self) or teachers (LPI-Observer) identify how regularly a leader make obvious search of the specific behaviours.

**2.7.1. Model the Way**

As we see that successful teachers set high expectations, opportunities and serve as role models for students same valuable managers create paradigms of brilliance, dominance and then place an example for followers. Modeling the way is fundamentally about making the right
and the admiration to direct through direct contribution and exploit. Leaders put examples for the favoured behaviours expected from followers. Leaders create standards and values of excellence, fineness and opportunities for accomplishment. They set rational short-term goals so that people can accomplish success along the way while working towards eventual goals.

Effective leaders portray from their personal experiences to manipulate their daily performance. These leaders first appear within themselves before modeling the way for others. Before setting expectations for organizations, effective leaders resolve their own personal values and philosophy.

People are often more willing to take action to leaders who have a clear considerate of their own skills and are willing to learn and grow in order to improve the organization. Kouzes & Posner (2006) conducted a research, “the quest for leadership, therefore, is first an inner quest to discover who you are, and it’s through this process of self-examination that you find the awareness needed to lead” (p.93).

Self-analysis is attained from instruments and indicator from others. The information learned is best used if it enhances relationships with others. Effective self-analysis necessitates leaders to be honest and accept censure about his qualities, skills, and decisions. If leaders will not have an accurate discernment their behaviour has on the organization, they aren’t honest in their self-analysis. Barbuto (2006) stated that leaders who are aware of their own potencies and Boundaries may appear self- analysis. These leaders often question their own capabilities and seek better and more resourceful tactics to meet the goals of the organizations.
For schools to be successful, ‘principals must model suitable behaviours’ and expected results, show a strong dedication and passion, and enhance relationships with others. Principals should also accept productive criticism and take responsibility for their own faults, while being open to suggestions for improvement from others.

2.7.2 Inspire the Shared Vision

Outstanding teachers understand, present keenness in their classrooms and they can make a difference in the lives of their students. Principals make obvious passion and think about how much more successful the school can become. Leaders who inspire a shared vision are able to envision probable and recruit others to share in the visualization.

Organizers respires life in to the trust and dreams of others and facilitate them to see the stimulating close to that the future grips. Principals have many roles in their leadership position and increasing household tasks, however, effective principals set and achieve goals that will help to improve the student performance. Effective principals are committed to envisioning a future and are able to encourage their staff to accept the vision, and work towards accomplishing the goals.

Leaders who have a vision and dreams but are unable to expand support from subordinates will not capable to meet their ambitions. “A person with no constituents is not a leader, and people will not follow until they accept a vision as their own. Leaders cannot command commitment, only inspire it” (Kouzes & Posner, 2002c:).

Leaders should guarantee that their vision is level-headed and then sets mall and achievable goals that the teachers can meet. Effective principals dream to have a strong desire to make a strong future for their school.
The principals increase a plan and know how to stimulate others to achieve outstanding results. Leaders who are able to enthuse a shared vision do not settle for status. Their visions and goals are about enhancement and they always try hard to create something better for the future. Effective principals have a passion to increase the success of their school. “Leaders uplift people’s spirits with an ennobling perspective about why they should strive to be better than they are today” (Kouzes&Posner, 2003, p.3).

According to Leithwood’s research (1999), a dependable finding is that the principals’ involvement in structuring the school’s goals make an important difference on school conclusions. Hallinger & Heck (1998) stated that a principal’s anticipation for achievement is a key factor in moving towards achieving the goals of the school.

Cox (2005) found that principals at all levels view visioning as an important characteristic of school leadership. Everyone has ideas about what the vision should be for the school. Strong leaders first realize their own personal vision and then they can suggest this message to other members of the organization. To build a dream or vision for schools, effective leader’s help others make connections to their vision in an effort to gain hold up from stakeholders.

Leaders should exhibit their commitment and passion towards the vision so that followers will want to be a part of making positive changes for executive improvement. According to Kouzes & Posner (2003) Leaders inspire a shared vision by envisioning the future and enlisting others in a common vision.
2.7.3 Challenge the Process

Successful teachers confront their students and encourage risk taking in the classroom. “Leaders challenge the process by searching for opportunities and by experimenting, taking risks, and learning from mistakes” (Kouzes & Posner, 2003:21). Schools face momentous challenges and powerful principals welcome these challenges rather than avoid them. They build on the small achievements that they encounter along the way towards upgrading.

Effective leaders use these as learning openings just successful teachers do in the classroom. Effective leaders are forever learners who desire to cultivate, grow and make improvements. “Leaders are pioneers people who are willing to step out in to the unknown. They search for opportunities to innovate, grow, and improve” (Kouzes & Posner, 2002:17)

Successful leaders set up atmospheres that promote experimenting with new data. They encourage instructors to reproduce on and question current practices in an attempt to grow and make generous progress. In successful schools, the stakeholders always safeguard a clear focus of the definitive goal which is student learning. Glickman (2002) stated that it is very clear in all regions of the school together with core curriculum, staff improvement, and employee’s judgments.

Effective leaders increase autonomy in their staff by building on successes and accepting play up or failure as critical learning opening. Principals can support life-long learners and also learn from their successes and mistakes. “Principals, as perpetual learners, are constantly reaching out for new ideas, seeing what they can learn from others and testing themselves against external standards” (Fullan, 1997:46). Chiefs who challenge the process suppose the same from their workforce so that learning opportunities are enhanced for all students.
2.7.4 Enable Others to Act

Effective teachers empower students and make them responsible for their own learning. Strong principals actively involve take holders in decision making. Effective leaders understand that outstanding results are achieved through teamwork and not by hoarding power. According to Kouzes and Posner (2007), empowering others allows leaders to enable others to make decisions which will produce exceptional results. Effective leaders create an atmosphere of trust so that followers will feel capable enough to work towards meeting goals. Empowering teachers increases confidence and proficiency throughout the school.

By strengthening others, each person feels knowledgeable and dominant. Great leaders seek out other people who will make the institution shine, not make the leader shine. Brower & Balch (2005) stated that building a collective atmosphere in institutions allows everyone to work in concert to make sure that students are getting knowledge and thriving.

Covey (2005) experienced that leaders should act with the supposition that one person does not have all of the truthful answers and that they should assessment input. Effective principals are aware of that teachers are the experts in the classroom and they trust them by giving them power so that their energies and resources can be fully operated. Teachers trust principals who value their estimations and allow them to make decisions in the best interest of students. Building spirited teams and actively involving others can increase both productivity and motivation throughout a school. In order to make organizations to grow and make inventive changes, leaders must facilitate others to act (Posner, 2007).
2.7.5 Encourage the Heart

Teachers recognize students for their hard work and realizations. Principals celebrate efforts and happenings made by their staff in successful schools. Students work harder when they respect their teachers and know they heed about them. Teachers are also strongly motivated when they are predictable for their successes and hard work. Leaders who encourage the heart understand that achieving beyond belief results is difficult and requires support along the way to keep hope. According to Kouzes & Posner (2003), leaders encourage the mind and soul of in-group in an effort to get them to carry on despite challenges by showing positive reception for individual happenings.

Today, where obstacles and annoying times are frequent in education, it is especially important for principals to celebrate the small successes so that teachers will continue working diligently toward goals. Effective leaders are aware of the authority they have over their followers and work to inspire others to do great things. Effective leaders recognize individual happenings of others both publicly and genuinely. Recognition should be based on the values that reflect the goals of the organization (Kouzes & Posner, 2003). They distinguish the importance of self-motivation. Strong principals are able to reward and distinguish for good work while helping and encouraging improving shortcomings. These principals are continually available to answer questions, show appreciation, and encourage others. Kouzes & Posner (2003) included seven essential mechanisms in describing “Encourage the spirit”: deposit clear principles, anticipate the best, personalize gratitude, pay concentration, tell the story, rejoice together, and set the models. They understand that showing appreciation for assistance and celebrating accomplishments is a strategy that is particularly motivating.
Celebrations and praise by leaders can be very motivating and stimulating for staff and can improve proves the culture of the whole organization. Glickman (2002) felt that school leaders, who connect with the hearts of staff, develop riotous behaviour and traditions that encourage teachers and students. Effective leaders focus on associations with people and maintaining a positive working environment. Goleman (2006) conducted a research and concluded that the indispensable task of a school leader declines to serving people get in to and stay in best situation in which they can work to their best facility.

Effective principals, acknowledging and build a caring and trusting environment by showing approval for the efforts of teachers and other staff. Strong leaders strive to bring out the best in workers while maintaining high expectations and constantly giving encouragement and feedback.

2.8 Perceptions of Leadership Behaviour-Studies using the Leadership Practices Inventory (LPI)

With strong leadership being a common thread of successful schools, it is central for principals to know and the understanding of their own leader’s behaviours so that they may enhance strengths and improve weak points. Principal’s also needed to be aware of their leader behaviours as professed by their teachers. A leader’s usefulness is largely determined by the discernment of followers. Empower teachers, and encourage them with celebrations and opinion.

The same instrument can be used to agree on how followers view leader behaviours. The development of Leadership Behaviours is a non-going process that is constantly developing, rather than simply mastering a skill. Effective leaders consider their followers observations about which leader qualities lead to achievement. “Leadership development is self-development:
getting feedback in our daily lives, setting self-improvement goals, learning from others and from experience, making changes in how we do things so as to continuously expand our ability and then getting more feedback to check our progress (Kouzes, 1999).

Kouzes (2003) stated that abundant studies have been finished over the past decade using different leadership registers in an effort to measure leader behaviours. The LPI has been used in education, business, industry, and other organizations. Results from these studies provide expensive and valuable information about effective leadership characteristics, and if there is a relationship between self and others and leadership effectiveness. Teachers’ scores on the LPI-Observer revealed significant differences when comparing academically flourishing to unproductive schools. In effective schools, there were no differences between the principals’ LPI-Self scores and the score of the teachers.

Pingle (2004) investigated the leadership practices of elementary school principals in South Carolina and the relationship between those preparation and academically campaigner schools. The LPI was used to measure leadership practices and the South Carolina School Report Card was used to determine if schools were mentally successful. Results of the study found no significant differences in the leadership practices reported by principals and academic success. However, results did reveal that teachers in academically successful schools rated their principal’s leadership practices significantly higher than teachers in rationally unsuccessful schools. This was trustworthy across all 30 Leadership Behaviours.

Rowland (2008) investigated the relationship of the principals’ leadership practices and the morale of the schools’ teachers in middle schools in Atlanta, Georgia. The researcher used the Leadership Practices Inventory (LPI) to measure leadership practices. According to the results of the study the principals have tortuous influence on student achievement by means of
teacher drive. The study also revealed the selected demographic variables (years of experience, age, gender, and ethnicity) to establish if they had an impact on discernment of leaders and observers in observe and regard to Leadership Behaviours. The researcher used the LPI-Self and LPI-Observer to contrast the perceptions of leadership customs by the principals and the site-based decision board members. Student realization was considered by the Texas Assessment of Knowledge and Skills (TAKS) tests. Sheppard’s (2007) study exposed that there was not a direct association between perceived leadership practices of the principals and student attainment. However, the results showed that principals rated themselves higher than the site-based committee members in all areas. Model the way gained the highest mean for both groups. Inspire a pooled vision and Enable others to act were rated lower by principals and site-based decision committee members. An interesting finding was that younger and less knowledgeable principals rated themselves more predictably than their older and more experienced colleagues.

Jarnagin (2004) observed the relationship between principal leadership practices and teacher moral in ten public secondary schools. The LPI-Self and LPI-Observer were used to determine principal Leadership Behaviours and the Purdue Teacher Opinionnaire (PTO) was used to measure teacher moral. The grades of the study revealed a constructive correlation flanked by the leadership practices of the LPI and teacher morale. Furthermore, the principals in the study designated that they more recurrently occupied in the identified leadership practices than their teachers’ awareness’s of this behaviour.

2.9 Leadership and Student Achievement

Although there have been studies of what is known about leadership and the correlation it has with student achievement, some researchers feel that Leadership Behaviours and student
achievement are not correlated. Educational researchers hold different views on the ways in which school chiefs get better instructive endings.

Some researchers have found that school leaders matters, whereas others have found no effects of school leadership as an effective enhancement of student outcomes. Since most studies on school management and student realization are neither tentative nor longitudinal, some opponent argue that it is not clear whether leadership guides to higher student attainment, or whether effective schools, teachers, and the community simply perceive more leaders to be additional capable (Bossert, Dwyer, Rowan, & Lee, 1982). In the last twenty years, educators have given much attention to the collision of educational leadership on student products. Normally researchers, on the other hand, harmonize that the consequences are oblique if not tricky to compute (Hallinger & Heck, 1998). The wavering notion of whether Leadership Behaviours contribute to student achievement has led researchers to search for evidence regarding principals’ effects on student achievement.

In spite of the deficiency of research that relates deviations in student accomplishment to what leaders do, Leadership Behaviours could predict, with some certainty, results in higher student getting. The relationship between leadership and student achievement appears to be negligible without effective leadership. Classical researchers such as Hersey, Blanchard, Katz, Kahn, Peters and Waterman identified various components that contribute to student accomplishment that they grouped into the following categories: recognize; develop consensus about; mould the way, inspirational the mutual dream, demanding the development, facilitating others to act, and persuade the mind and soul fully to utilize their capabilities.

Miller (1999) discovered during an investigation of two New York inner-city schools, that important distinction in pupil learning can happen between schools with nearly matching
services, personnel, and low income student enrolment. The findings of this study suggest that the differences in pupils’ reading achievement in both schools were attributed to administrative policies, behaviour, procedures and practices. The schools in this study operated under different administrative leadership abilities and proved to have very different outcomes in terms of student achievement. In an institute ‘A’ the leader and his subordinate, major were able to run an arranged, peaceful, and efficient school with a high quantity of collaboration from the teachers, students, and the parents. Educational criterion could be put in practice and children could learn more while creating this type of environment. Because school ‘B’s administrative team had difficulty eliciting cooperation from its stakeholders, the children had less of an opportunity to learn.

Some educators have reported for a long time that school leadership makes a difference. Studies on school climate, school effectiveness, and student achievement depend on school leadership (Norton, 2002). Marzano (2003) studies on school effectiveness reported that leadership was one of several defining characteristics of successful schools. The researcher proposes to investigate the correlation of school Leadership Behaviour and student achievement. In order to address if school leaders matter, Bredson (1996) stated that there is abundant rationale in the creative writing that successful leadership can and does positively affect school and student products.

It is important to understand the role of a school leader in order to understand the instructional component of the school leader and what it means. Murphy (2002) stated that instructional leadership centers on management roles nonstop related to instruction and learning. In a broader apparition, instructional leadership refers to all other occupations that contribute to student scholarship, counting executive behaviours (Donmoyer, 1990). Such an action direction
supposedly and theoretically encompasses everything a primary does during the day to support the accomplishment of students and the skill of teachers to teach (Sebring & Byrk, 2000).

2.10 School Health

The concept of organizational health in education is not new. Miles (1969) applied the concept to public school climate and related it to the school’s ability to function effectively as well as to grow and develop. School health has also been related to achievement, change efforts, and attitudes toward discipline (Brookover et al, 1978; Clark, 1983). Business scholars have researched aspects of organizational health for many years. Schein (1996) and Daft (2007) applied the concept to organizational culture. Others focused on components such as organizational commitment, organizational citizenship, and organizational stress (Cryer, 1996).

More recently, this literature has been enhanced by discussion on supervising and testing the organizational health of an organization (Lyden & Klingele, 2000). The study of organizational health in higher education and specifically teacher education programs is limited. However, internal organizational practices, such as those dealing with resource allocation, evaluation incentives, reward systems, and performance recognition, have been purported to have notable effect on organizational health in academia (Boyer, 1990; Glassick, Huber, & Meroff, 1997). Also, it has been found that the degree of dedication that a faculty member exhibits can affect the climate of the workplace positively or negatively (Bandura, 1982). In addition, faculty rewards were found to be especially important to a healthy academic climate.

The concept of school health was developed to capture the nature of student-teacher, teacher-teacher, and teacher-administrator communications. The suggestion of health in a company is not new; it calls attention to factors that both make possible and obstruct the
development of positive interpersonal dealings within the association (Hoy & Forsyth, 1986). A well-managed institute is one in which conformity saturates relationships amongst students, teachers, and superintendent as the group eternal its energies toward its charge. Healthy schools appear to be high completing institutions (Hoy et al., 1990). In seeking to describe differences between effective and ineffective schools, researchers have identified several managerial descriptions that are connected with student accomplishment. Many of these characteristics (e.g., warm collegial relations, high academic expectations) are also indicators of the health of a school (Brookover et al., 1978; Ellet & Masters, 1978).

School health is a framework for examining organizational climate of all public systems to solve the essential problems as they are to suffer, grow, and boost. Schools to be healthy are required to assemble the requirements of edition and their goal achievement, in addition to the forthcoming needs of social and normative integration. They must successfully cope with their environments as they move toward their goals. At the same time, schools to be healthy, must maintain solidarity and coordination among their component parts as well as develop and transmit their distinctive culture and values.

According to Parsons, Bales, and Shils (1953) argued that schools have three levels of control in excess of these needs; perfunctory, clerical, and institutional. The automatic level of a school is concerned with the beliefs learning process. The main job of the school is to generate skilled and learned students. Educators and managers have main accountability for solving the resist associated with successful learning and instruction. The white-collar level controls the inner executive function of the alliance. Principals are the prime administrative executive of schools. They share out resources and manage the work effort. They must find ways to enlarge
teacher commitment, trust, stimulus, and declaration. At the same time, principals must implement pressure with their greater to gain possessions for their schools and faculties. Legitimacy, legality and support are needed by the schools in the center of population. Equally leaders and tutors need support and seize if they are to proceed upon their personal occupations in a harmonious fashion without excessive anxiety from persons and groups from exterior the school.

These points of view provide the theoretical underpinnings for major and implementation school health (Hoy & Feldman, 1999). Particularly, a strapping school is one in which the unconscious, practiced, and institutional levels are in harmonization and the school is meeting both its instrumental and outgoing needs as it successfully deal with rebellious exterior forces and articulate its energies toward its obligation. Five characteristics of organizational strength; institutional honesty, principal authority, deliberation, source sustain, and educational stress have been identified to describe the health of a school.

Institutional honor is a school's facility to deal with its atmosphere in a way that maintains the educational honesty of its programs. Teachers are sheltered from difficult to deal with area and parental anxiety. Main emphasis is the principal's capability to pursue the actions of higher. Being gifted to persuade greater, get additional deliberation, and be unconstrained by the organizational pecking order are necessary skills to be effective as a principal. Contemplation is leader’s behaviour that is gracious, responsive, helpful, unfasten and collegial; it represents a valid anxiety of a principal for the interests of teachers. Reserve sustain refers to a school where adequate classroom supplies and instructional and educational equipment are available and extra re-sources are voluntarily supplied if appealed. Academic inflection is the extent to which a
school is resolute by a quest for educational excellence. Towering but accessible academic objectives are placed for students; in sequence surroundings is arranged and serious; teachers believe in their students' ability to finish; and students work hard and admiration who want to do well realistically.

Therefore, institutional integrity is an indicator of health at the institutional level and serves the involved function of helping the school social system cope with its environment. Major pressure, deliberation, and reserve support provide measures of the health of the professional system. Thoughtful principal behaviour stimulates solidarity and cooperative expressive norms among teachers. Resource support is an instrumental mechanism to help teachers accommodate to the social system, and the principal influence has a dual function in schools: it helps integrate the school into the broader social system while providing teachers with the instrumental support that they need. At the technical level, self-esteem and educational emphasis are the index of health (Hoy & Feldman, 1987).

2.11 Managerial Health

Near the beginning use of the notion of managerial health was done by Miles (1969) when analyzing schools. He distanced managerial health that a strong association is an organization which not only continues its life within its own margins. Moreover, they continuously cooperate with its environment, receive input from and give output to the environment and use its potential to overcome problems and continue its livelihood in this process (Akbaba, 2001).

In recognizing correspondence between organizations and living things, some researchers recommend that associations may perhaps grow to be ill alike livelihood things do. The
researchers also demonstrate concentration to the announcement that there may be “poorly” societies. If all the sub-systems of an association activate strongly, the association is believed healthy as a consequence showing the expertise of the association to complete its purposes (Bass, 1990, p. 277; Akbaba, 2001; Korkmaz, 2005; Cemalog, 2006, p. 64).

Brookover et al. (1978) concluded that the utilization of the concept of school health in place of managerial environment is significant for school effectiveness. In their advancement of the organizational Health Inventory (OHI-S), Hoy and Feldman (1987) described in the cerise and harmful organizations. In a healthy institute, school employees are protected against the pressures coming from outside. Teaching reserves are inexpensively used in the regulation. In dissimilarity, in damaging organizations, there is nervousness on the school personnel, professional skills of the principal are imperfect, and in school declaration is demanding with conflicts and low university occasions.

Hoy and Miskel’s (1991) OHI-S duplicates the following sub-dimensions: managerial truthfulness, origination association, principal influence, reserve bear, forethought, and educational importance. According to Tsui and Cheng (1999) clerical truth is the capacity of the school to be in harmony with its environment, having integrity within the training programs, and handle with negative assaults against the school. This is a dimension which the school looks for in order to get to the ideal in educational requirements where learners are deliberation to be victorious (Hoy and Miskel, 1991; Tsui and Cheng, 1999b; Akbaba, 2001: p. 38; Zdemir, 2002; Korkmaz, 2005).

Studies related to organizational health were started in the 1970s and made immediate progress into the 1980s. Clark and Fairman (1983) identify professional health as strong characteristic purposeful actions in recovering school health. Childer and Fairman (1986)
indicate that principals may undertake in victorious planned modify. Hoy et al. (1990) provides an effective analysis of the concepts managerial health and organizational atmosphere.

2.12 School Organizational Health

The term School Organizational Health is a symbol used for conceptualizing the atmosphere of a school. The organizational health of a school is a realistic construct that explains the interpersonal relations of students, teachers and leaders in a school (Hart, Conn, & Carter, 1992; Hoy & Tarter, 1997). The utilization of the shape of health to examine the climate of schools was first proposed by Miles (1969), and a healthy association was hypothetical as one that not only survives in its surroundings, but continues to cope unobjectionably over the long pull, and constantly develops and widens its existing and usage abilities. Currently, many schools in the state understand rapid changes. They are required to adapt to the shifting surroundings and meet different nervousness from students, parents and the general public. It seems that a healthy School would be better environment for instructors to work and administer with faces from the domestic and outer environments. School office health might be an important and powerful formation for imprisoning the impression of an effective school.

The conceptualization of school executive health may be based on two reflections. First, the school is measured as a common arrangement, in which people take the roles of supervisors, teachers, students, and so forth. Therefore, school directorial health should repeat social communications amid to these key groups of actors in school (Hart et al., 1992; Tsui, Leung, Cheung, Mok, 2000). To direct, a healthy school should be successful in performing it’s a choice of school functions. According to Parsons’s views of associations (Parsons, 1967), a healthy school is one in which the industrial, administrative, and institutional levels are in organization.
and which can meet both its helpful and communicative needs through selling with inflammatory external forces and from end to end its energies toward sits assignment.

Five magnitudes of school accounting health are conceptualized to stand for each of the essential needs of communal systems as well as the 3 levels of arrange established in generally associations (Hoy et al., 1991).

School Organizational Health consists of the five subscales given below;

1- Institutional Integrity (II)
2- Collegial Leadership (CL)
3- Resource Influence (RI)
4- Teacher Affiliation (TA)
5- Academic Emphasis (AE)

These five subscales are also elaborated through Figure 2.2 given below;
2.12.1 Institutional integrity (II)

According to Hoy and Hannum (1997) “the degree to which the school can deal with its environment in a way that carries on the educational honesty of its programs” (p. 294).
2.12.2 Collegial leadership (CL)

Principal’s Behaviours that is welcoming, encouraging, open, and guided by norms of equality but, at the same time, the principal puts the manner for high routine by letting people know what is regular of them.

2.12.3 Resource Influence (RI)

Resource support refers above all to the accessibility of classroom goods and instructional equipment. Adequate resources readily exist; indeed, extra equipment is supplied if requested.

2.12.4 Teacher Affiliation (TA)

Teachers feel superior about each other, their profession, and their students. They are dedicated to both their learners and their production and achieve their jobs with enthusiasm.

2.12.5 Academic Emphasis (AE)

The extent to which the school is driven from a search for academic brilliance. High but attainable academic goals are set for students, the learning environments is orderly and serious, teachers suppose in their students’ ability to overcome, and students work hard and respect those who do well reasonably.

The relationship between Leadership Behaviour, School Organizational Health and Students’ Academic Achievement is also elaborated through Figure 2.3 given below.
Figure 2.3  Pictogram Presenting Relationship between Leadership Behaviour, School Organizational Health and Students’ Academic Achievement.
2.13 Leadership Behaviour, School Organizational Health and Students’ Academic Achievement

According to Marzano, Waters & McNulty (2005) there is a strong association between successful school leadership, school climate, eminence instruction, and student realization. Research is revealing that improved student performance is extensively dependent on school headship. The constructive behaviours of principals are directly linked to the climate of the school to make it effective (Thornton, Kelley, & Daugherty, 2005). In schools, the role of the leader is to ensure that all students are learning and gaining knowledge. A principal or leader is responsible to produce ideal conditions for teachers so that they are equal to the important duty of drilling students.

Hammond, & Bransford (2007) searched that leaders require being able to shape and maintain strong education, and to be able to build up organizations that are measured to maintain profound learning for teachers and apprentices. In order to be strong instructional leaders, principals should have to understand the strengths of their schools as well as their needs. Thornton et al. (2005) is of the view that trained leaders accurately envisage future requires and authorize others to contribute to and realize that vision. Researchers have identified the behaviours that describe effective leadership, as Hammond (2007) stated that;

“Set direction, by developing a consensus around vision, goals, and direction. Further to help individual teachers, through support, modeling, and supervision, and develop collective teacher capacity, through collaborative planning and professional development that creates shared norms of practice. Moreover redesign the organization to enable this learning and collaboration among staff (and personalization/support for students), as well as to engage families and community”.
According to Brubaker and Coble (2005), self-awareness and manifestation help leaders to adapt and better understand weaknesses. School leaders analyzed their strengths and weaknesses in areas that have been identified as critical to effective school leadership through Self-assessment tools. Rowland (2008) added that the relationship of the principals’ management practices and the confidence of the school teachers in middle schools in Atlanta, Georgia. The grades and results of the study exposed that principals do have an indirect influence on student achievement by means of teacher morale. The results also designated that the strongest positive relationship between the leadership practices to enable others to perform and teachers’ morale. Behaviours of principals take an important part in the school environment of the results involving that the leadership.

School principals held accountable for everything that happens in their schools. Holloway, (2006) stated that with the focal point today on student presentation on consistent tests, it has become even more critical to find the most valuable and efficient approach to administer schools. Sergiovanni (1996) conducted a research that schools require principals who can institute a shared vision, keep up collegiality, motivate staff, and manage the duties that allow the school to run successfully and efficiently. Their positions require that they Figure out academic content and pedagogy, teaching methodology, fortify collect and analyzed data the instructional practices of teachers, rally a broad constituency around a single purpose of raising student achievement, and deal with the social and biased pressures of competing factions. Principal as conformist manager is no longer good enough.

Sheridan and Gutkin (2000) acknowledged four essential assumptions addressing students within the contexts of classrooms, schools, and neighborhoods. Moreover, each student is an indivisible part of a small social system, and trouble is not vision as a disease located inside
the body of the student but somewhat. Additionally, discordance in the system that may be
definite as an inequality between an individual’s capacities and the burdens or expectations of
the environment, and the goal of any intervention is to make the system work.

With these assumptions in mind, it becomes clear that in order for a system to operate
effectively and efficiently, social contexts must be evaluated. Parsons, Bales and Shils (1953)
identified four basic problems that social systems must solve to survive, grow, and develop.
These basic problems are comprised of obtaining adequate sources and compliant to their
surroundings, location and execute ambitions, maintaining commonality within the school, and
producing and preserving restricted value system.

Furthermore, Parsons (1967) identifies divergent levels of control over needs are three
like industrial, professional, and institutional. The technical level functions to produce educated
students and is disturbed with the teaching-learning process. The managerial level focuses on the
control of internal administrative function, thereby focusing on principals’ abilities to develop
and instruct faithfulness, confidence, obligation, and enthusiasm. Lastly, the connection of the
school with the environment occurs at the institutional level.

Haynes et al. (1997) explores that superiority and reliability of interpersonal
communications within the school community influences children’s mental development,
cognition, social and emotional development has been reported to have an enormous impact on
children. Studying school climate is not only on the environment’s direct affiliation with
children’s expansion, but also on not direct factors as personnel support.

Leadership is manifested through the span of organizational health (Hoy, Tarter, &
Kottkamp, 1991). A healthy organization is characterized as one that adapts to its environment
and has the presence of strong leadership. In contrast, an unhealthy organization is one that is
characterized as incapable of adapting to its environment and has a lack of, or no, central leadership. School Organizational Health measures the factors like Institutional Honesty (II), Collegial Management (CL), Reserve Pressure (RI), Teacher Association (TA), and Academic Stress (AE) which might have a direct impact on students’ achievement (Chauvin, 2010).

School leadership can increase or decrease students' chances for academic success (Marzano et al., 2005). The general problem is that, the role of a principal involves many diverse tasks, designed to enhance teaching and learning. In an era of accountability, leadership behavior is a complex endeavor. Principals who possess skills in curriculum and instructional leadership are better prepared to school improvement efforts (Murphy & Hallinger, 1992). Student learning and student achievement become the central focus of leadership while the operational and managerial tasks of running the school become a secondary focus (Scrivner et al., 2000). Hallinger and McCary (1990) purported effective leaders consciously choose and adapt intrapersonal and interpersonal skills to facilitate, model, collaborate, and lead. That is why a study of management behaviors and the extent to which such behaviors correlate with organizational health might be an important step in understanding the relationship between principals’ Leadership Behaviors and Students’ Academic Achievement.

The study is expected to add to the body of knowledge which will be helpful to the principals in becoming more coping with their own Leadership Behaviors and their superficial leader behaviors by teachers and terminate if these behaviors are related to principals’ possession at the current school and his total familiarity. Therefore, the primary purpose of the study is to compare private and public sector schools to investigate differences in the organizational health, and its’ effect on Students’ Academic Achievement accordingly. The study has also investigated other characteristics of school leaders’ like gender to see if any difference exists between their Leadership Behaviour on two types of schools public and private schools.
CHAPTER III

Methodology

This chapter deals with the methodology and procedure of the study, the population of the study, sample, sampling procedure, instruments for collection of data, and data analysis. The purpose of the study was to find out the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement at secondary level. As 10th grade students go through the external exams conducted by the Board of Intermediate and Secondary Education; therefore achievement score of their external exam was more appropriate to serve the purpose of the study. Moreover, generally all the 10th grade students spend two years in the same institution, that is why they were supposed to be well aware about the school health and they were chosen to collect data with reference to organizational health.

Related literature was reviewed for the analytical structure and to provide a sound base for research variables. It supported the researcher to comprehend the importance of selected variables and helped in finding the indicators of variables. A comprehensive discussion and explanation on Leadership Behaviour, Organizational Health and Students’ Academic Achievement has been given in Chapter 2.

3.1 Nature of the Study

The study falls in positivist paradigm and accordingly quantitative approach has been adopted to conduct the study. The independent variables of the study are Leadership Behaviour and School Organizational Health, and dependent variable is students’ Academic Achievement. The independent variables are not manipulated and are not under the direct control of the researcher. The study, therefore, is Ex-Post-Facto in nature.
According to Cohen, Manion & Morrison (2000) Ex-Post-Facto research is of two types i.e. criterion group study and co-relational study. The present study is of co-relational type.

Moreover this type of research is systematic empirical inquiry in which researchers do not have direct control of independent variables because their manifestations have already occurred and they are not manipulated inherently (Silva, 2010).

In this study, inferences about relationship among variables have been made without direct intervention of independent and dependent variables. Basically, this type of research is based on a scientific and analytical examination of dependent and independent variables where independent variables are studied in survey for seeking possible and plausible relations and effects that independent variables produce changes on dependent variables. However, independent variables in this type of research are not manipulated but have occurred already that sometimes are also called attribute variables. Moreover, this is less costly and time consuming because establishing cause-effect relationship is more thought-provoking than in experimental research, where independent variables are manipulated by the researcher (Silva, 2010).

3.2 **Population of the study**

All the secondary school principals, teachers and students of 10th grade in all the 36 districts of the Punjab province of Pakistan were the target population. Whereas, both male and female public and private secondary school principals, teachers and students of the four districts (Chakwal, Lahore, Jhang and Rajanpur) of the Punjab were the accessible population.
3.4 Sampling Design

To get the sample out of accessible population, four districts of Punjab province were selected on the basis of simple random sampling technique by dividing the Punjab province in three geographical regions. That is southern, northern and central Punjab. Southern Punjab contains seven districts, Multan, Khanewal, Vehari, Bahawalnagar, Bahawalpur, Rahim Yar Khan, and Lodhran. Northern Punjab contains eleven districts, Bhakkar, Dera Ghazi Khan, Muzaffargarh, Rajanpur, Mianwali, Khushab, Layyah, Rawalpindi, Jehlum, Chakwal, and Attock. Central Punjab contains eighteen districts like; Lahore, Sialkot, Gujranwala, Narowal, Faisalabad, Toba Take Singh, Mandi Bahaudin, Sargodha, Sahiwal, Sheikhupura, Hafizabad, Okara, Jhang, Kasur, Pakpatan, Nankana and, Chaniot. The detail of 36 districts of the Punjab province is shown in the map given below in Figure 3.1 from where the sample was selected.
One district from southern Punjab, one district from northern Punjab and two districts from central Punjab were selected through Non-Proportionate stratified random sampling technique which are presented in Table 3.1.

This table presents the population and its distribution in different geographical regions as stated above. Selected sample out of these regions was Rajanpur district from Southern region,
Chakwal district from Northern region, whereas Jhang and Lahore districts were selected from Central region.

Table 3.1

*Selected Districts from each region of the Punjab province*

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Regions</th>
<th>Total Districts</th>
<th>Selected District</th>
<th>Sampled Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Southern</td>
<td>07</td>
<td>01</td>
<td>Rajanpur</td>
</tr>
<tr>
<td>2.</td>
<td>Northern</td>
<td>11</td>
<td>01</td>
<td>Chakwal</td>
</tr>
<tr>
<td>3.</td>
<td>Central</td>
<td>18</td>
<td>02</td>
<td>Jhang &amp; Lahore</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36</td>
<td>04</td>
<td></td>
</tr>
</tbody>
</table>

Schools in each selected district were divided into two strata i.e. public schools and private schools. Each stratum was further divided into two sub strata i.e. boys schools and girls schools. Eight boys’ and eight girls’ schools were selected randomly from each district. Whereas, one principal, two secondary school teachers (SST), and thirty students from each school were selected. To understand this more easily a flow chart showing sampling scheme is given in
Figure 3.2 Flow Chart Showing Sampling Scheme

Total number of district in Punjab = 36

Selection of Districts

District-1

District-2

District-3

District-4

Selection of Schools from Each District

Public Schools - 8

Male Schools: 4

Female Schools: 4

Private Schools - 8

Male Schools: 4

Female Schools: 4

Total number of Principals selected from one district 16x1 = 16

Total number of teachers selected from one district 16x2 = 32

Total number of students selected from one district 16x30 = 480

Selection of Schools from 4 Districts 16x4 = 64

Selection of Respondents from 64 Schools

Principals @ 1 from each school

64 Principals

Teachers @ 2 from each school

64x2 = 128 Teachers

Students @ 30 from each school

64x30 = 1920 Students

The sampling scheme elaborated in the above figure was my sample used for this study.
The total sample was comprised of sixty four principals (1x64= 64), one hundred and twenty eight secondary school teachers (2x64=128) and nineteen hundred and twenty students (64x30 = 1920) from the selected districts.

3.4 **Instruments used for the study**

Prevalent literature on the Leadership Behaviour, School Organizational Health and Students’ Academic Achievement lead towards the following instruments for data collection:

1. Leadership Practices Inventory Self (LPI-S)
2. Leadership Practices Inventory Observed (LPI-O)
3. Organizational Health Inventory (OHI)

A brief description of these instruments is as under;

### 3.4.1 Leadership Practices Inventory Self (LPI-S)

Leadership Practices Inventory Self (LPI-S) developed and used by Kouzes & Posner (2003) was an instrument for the study at hand. Martin (2011) in his study “The relationship between principals’ Leadership Behaviour and principals’ experience” also used this instrument. Its reliability and validity were well documented and proven. It was short and easy to fill out and this was the main cause of its wide usage throughout the world. Permission was sought through an e-mail from the developers to use the Leadership Practices Inventory Self (LPI-S), adopted inventory is attached as (Appendix-A). This was administered on principals of the sample schools.

To measure Leadership Behaviour of the headteachers (LPI-S) at 6 point Likert Scale from rarely to very frequently was used. This inventory is comprised of 30 items measuring all
five factors or subscales of leadership behavior like; (1) Model the way, (2) Inspire a shared vision, (3) Challenge the process, (4) Enable others to act, (5) Encourage the heart.

To find out reliability of LPI-S in Pakistani context, Cronbach’s Alpha was calculated for each of the factor, by using SPSS as described under the heading of Pilot Testing. The items were scored by assigning 1 to "rarely occurred," 2 to "seldom occurred," 3 to "occasionally occurred," 4 to "fairly often," 5 to "usually occurred," and 6 to "very frequently occurred." LPI-S factors with their reliability are given in Table 3.2.

Table 3.2

Reliability Values for Subscales of Leadership Practices Inventory Self

<table>
<thead>
<tr>
<th>Subscales / Factors</th>
<th>Item numbers</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model the Way</td>
<td>1,6,11,16,21,26</td>
<td>.77</td>
</tr>
<tr>
<td>Inspired a Shared Vision</td>
<td>2,7,12,17,22,27</td>
<td>.87</td>
</tr>
<tr>
<td>Challenge the Process</td>
<td>3,8,13,18,23,28</td>
<td>.80</td>
</tr>
<tr>
<td>Enable others to Act</td>
<td>4,9,14,19,24,29</td>
<td>.75</td>
</tr>
<tr>
<td>Encourage the Heart</td>
<td>5,10,15,20,25,30</td>
<td>.87</td>
</tr>
</tbody>
</table>

This table presents the factors of Leadership Practices Inventory Self (leadership behavior as described by the principals themselves). This inventory has five subscales to measure the leadership behavior of principals. Each subscale consists of different 6 items, and Cronbach Alpha Reliability as measured by the developers of the instrument for each subscale is also presented in this table.
3.4.2 Leadership Practices Inventory Observer (LPI-O)

To measure Leadership Behaviour of the headteachers as perceived by the Secondary School Teachers (SST), Leadership Practices Inventory Observer (LPI-O) developed and used by Kouzes and Posner (2003) that is at 6 point Likert Scale from rarely to very frequently was used. This inventory consists of 30 items measuring all five factors of leadership behavior like; (1) Model the way, (2) Inspire a shared vision, (3) Challenge the process, (4) Enable others to act, (5) Encourage the heart.

To find reliability of Leadership Practices Inventory in Pakistani context, Cronbach’s Alpha was calculated for every factor by using SPSS. Because this inventory is compulsory part of the Leadership Practices Inventory Self and was required for teachers’ statements about their principals behaviour. Teachers were named as observers for this inventory. Basically, the name of the second part of this inventory is Leadership Practices Inventory Observers, which is why teachers were named as observers for their principals. The permission was sought for its use through an e-mail that is attached as Appendix-D, and the adopted Leadership Practices Inventory Observer (LPI-O) is attached as Appendix-A. This inventory was administered on SSTs of the sample schools. The items were scored by assigning 1 to "rarely occurred," 2 to "seldom occurred," 3 to "occasionally occurred," 4 to "fairly often," 5 to "usually occurred," and 6 to "very frequently occurred." LPI-O factors with their reliability are given in Table 3.3.

This table describes the factors of Leadership Practices Inventory Observer (leadership behavior of school principals described by the teachers). This inventory has five subscales to measure the leadership behavior of principals. Each subscale consists of different 6 items and
Cronbach Alpha Reliability measured by the developers for each factor is also presented in this table.

Table 3.3

Reliability Values for Subscales of Leadership Practices Inventory Observer

<table>
<thead>
<tr>
<th>Subscales / Factors</th>
<th>Item numbers</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model the Way</td>
<td>1,6,11,16,21,26</td>
<td>.88</td>
</tr>
<tr>
<td>Inspired a Shared Vision</td>
<td>2,7,12,17,22,27</td>
<td>.92</td>
</tr>
<tr>
<td>Challenge the Process</td>
<td>3,8,13,18,23,28</td>
<td>.89</td>
</tr>
<tr>
<td>Enable others to Act</td>
<td>4,9,14,19,24,29</td>
<td>.88</td>
</tr>
<tr>
<td>Encourage the Heart</td>
<td>5,10,15,20,25,30</td>
<td>.92</td>
</tr>
</tbody>
</table>

3.4.3 Organizational Health Inventory (OHI)

Organizational Health Inventory for Schools (OHI) was developed and used by Hoy, Tarter, and Kottkamp in 1991. Afterwards this inventory was also used by Hoy & Tarter in 1997. This is a specific inventory for Organizational Health in Schools that has been widely used in different studies. This inventory is comprised of 37 items at 4 point Likert scale measuring five dimensions of school health like Institutional Integrity, Collegial Leadership, Resource Influence, Teacher Affiliation, and Academic Emphasis as a subtest of the OHI.

This inventory was adopted by the researcher after getting permission from the developers, and is attached as Appendix-B. Permission was sought through an e-mail to use it for
secondary schools to assess dimensions of the organizational health and the permission is attached as Appendix-E.

Since Organizational Health Inventory for Schools OHI has been extensively used and its reliability and validity were well documented and proven and many experts had verified it to be very valid having good content validity, impressive constructs validity and adequate reliability (Hoy et al., 1991; Hoy and Hannum, 1997; Chauvin, 2010). Moreover, it was short and easy to fill out and this was the main cause of its wide usage throughout the world. The OHI was translated by the researcher from English to Urdu to make it understandable to the students and was validated by a panel of bilingual experts. This translated version is attached as Appendix-C.

This inventory was designed by Hoy, Tarter & Kottkamp (1991) to measure the respondents’ perceptions. Respondents were asked to indicate the extent to which each statement describes about their school along a four point Likert Scale from "rarely" to" very frequently occurs." The following items are examples for each scale: "teachers are protected from unreasonable community and parental demands" (Institutional Integrity); "the principal gets what he or she wants from seniors" and "the principal puts suggestions made by the faculty into operation" (Collegial Leadership); "extra materials are available if requested" (Resource Influence); "teachers in this school like each other" (Teacher Affiliation); "the school sets high standards for academic performance" (Academic Emphasis). Each factor was composed of a phrase description, some of which were purely descriptive and some of which were affective and evaluative (Hoy, Podgurski & Tarter, 1991). All items consist of simple descriptive statements. Each scale has a relatively reasonable reliability coefficient.
Alpha coefficients for each subset in the sample selected for piloting were also calculated that are given in Table 3.4. The stability of the factor structure of the OHI supports the construct validity of the dimensions of the instrument (Hoy & Feldman, 1987).

Table 3.4 describes the original reliability values as measured by the developers of the inventory. Moreover, all five subscales measuring Organizational Health of schools are separately described in terms of their relevant items with the value of Cronbach’s Alpha Reliability for these items.

Table 3.4

*Reliability Values for Subscales of Organizational Health Inventory*

<table>
<thead>
<tr>
<th>Subscales / Factors</th>
<th>Item numbers</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Integrity (II)</td>
<td>8,14,19,25,29,30</td>
<td>.90</td>
</tr>
<tr>
<td>Collegial Leadership (CL)</td>
<td>1,3,4,10,11,15,17,21,26,34</td>
<td>.95</td>
</tr>
<tr>
<td>Resource Influence (RI)</td>
<td>2,5,9,12,16,20,22</td>
<td>.89</td>
</tr>
<tr>
<td>Teacher Affiliation (TA)</td>
<td>13,23,27,28,32,33,35,36,37</td>
<td>.94</td>
</tr>
<tr>
<td>Academic Emphasis (AE)</td>
<td>6,7,18,24,31</td>
<td>.87</td>
</tr>
</tbody>
</table>
3.4.4 Analytical Procedure of Scoring of the Items of Organizational Health Inventory

The items were scored by assigning 1 to "rarely occurred," 2 to "sometimes occurred," 3 to "often occurred," and 4 to "very frequently occurred." When an item was reverse scored, "rarely occurred" received 4, "sometimes occurred" received 3, and so on. Each item was scored for each respondent, and then an average school score for each item was computed by averaging the item responses across the school because the school was the unit of analysis. Reversed score items were 6, 8, 14, 19, 25, 29, 30, 37. Average school score for each item was calculated and rounded to the nearest hundredth.

3.4.5 Students’ Academic Achievement score

Students’ Academic Achievement at secondary level is basically the marks obtained by the students in final examination held by the Board of Intermediate and Secondary Education i.e. based on annual examination for 9th and 10th grade separately. That is why the achievement scores of students were obtained from the annual examination results of the Boards of Intermediate & Secondary Education of Punjab held in year 2013. The respective boards were; Board of Intermediate & Secondary Education, Lahore, Faisalabad, Rawalpindi, and Dera Ghazi Khan.

At secondary level, for the development of question papers and evaluation, standard procedures are observed by a panel of assessment experts. Four Boards of Intermediate and Secondary Education in Punjab allocate different science and arts subjects to subject specialists, head teachers and teachers to develop examination papers. Two days training workshop is conducted to train the paper setters and each paper setter prepares six sets of subject papers.
consisting of 12 Multiple Choice Items, 22 Short Answer Questions and 3 Extended Response Questions. To ensure the content validity of the test, chapter-wise proportional weightage is conveyed to the paper setters. An expert of the concerned subject is also appointed as coordinator who reviews all the test items and paper as a whole and makes changes if necessary. The Multiple Choice Questions are marked while short answers and extended response items are evaluated by already developed rubrics to eliminate biasness in the evaluation process.

3.5 Pilot Testing

Both instruments namely Leadership Practices Inventory i.e. Leadership Practices Inventory Self (LPI-S) and Leadership Practices Inventory Observers (LPI-O); and Organizational Health Inventory were pilot tested on 260 subjects (Principals = 20, SST = 40, Students = 200) in district Lahore. These respondents were selected outside the research sample from the same population of the study from public and private sector secondary schools. Internal reliability of the tools was calculated through Cronbach’s Alpha.

3.5.1 Pilot Testing of Leadership Practices Inventory Self (LPI-S)

The first part of the research tool, Leadership Practices Inventory self; a detailed description is given below in Table 3.5. This table presents the total number of items of the questionnaire, their mean, standard deviation, and Cronbach Alpha Reliability for this inventory in Pakistani context. This is about the first component of the Leadership Practices Inventory as perceived by the secondary schools principals themselves.
Table 3.5

**Reliability of Leadership Practices Inventory Self**

<table>
<thead>
<tr>
<th>No.of Items</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1.48</td>
<td>19.46</td>
<td>.92</td>
</tr>
</tbody>
</table>

Items used to find out the reliability regarding leadership practice inventory self (LPI-S), the Leadership Behaviour of secondary school principals as described by themselves are given in detail in Table 3.6. In fact, this table describes the co-relation of total items, Cronbach Alpha Reliability of the item-if items deleted, and the nature of the item statement for all 30 items.
Table 3.6

*Detail of Items used for Leadership Practices Inventory Self*

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item-Total Correlation</th>
<th>Cronbach's Alpha (if Item Deleted)</th>
<th>Nature of statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.380</td>
<td>.922</td>
<td>Positive</td>
</tr>
<tr>
<td>2</td>
<td>.121</td>
<td>.924</td>
<td>Positive</td>
</tr>
<tr>
<td>3</td>
<td>.480</td>
<td>.920</td>
<td>Positive</td>
</tr>
<tr>
<td>4</td>
<td>.626</td>
<td>.918</td>
<td>Positive</td>
</tr>
<tr>
<td>5</td>
<td>.633</td>
<td>.917</td>
<td>Positive</td>
</tr>
<tr>
<td>6</td>
<td>.806</td>
<td>.914</td>
<td>Positive</td>
</tr>
<tr>
<td>7</td>
<td>.659</td>
<td>.917</td>
<td>Positive</td>
</tr>
<tr>
<td>8</td>
<td>.228</td>
<td>.922</td>
<td>Positive</td>
</tr>
<tr>
<td>9</td>
<td>.430</td>
<td>.920</td>
<td>Positive</td>
</tr>
<tr>
<td>10</td>
<td>.851</td>
<td>.914</td>
<td>Positive</td>
</tr>
<tr>
<td>11</td>
<td>.466</td>
<td>.920</td>
<td>Positive</td>
</tr>
<tr>
<td>12</td>
<td>.510</td>
<td>.919</td>
<td>Positive</td>
</tr>
<tr>
<td>13</td>
<td>.416</td>
<td>.921</td>
<td>Positive</td>
</tr>
<tr>
<td>14</td>
<td>.422</td>
<td>.921</td>
<td>Positive</td>
</tr>
<tr>
<td>15</td>
<td>.757</td>
<td>.915</td>
<td>Positive</td>
</tr>
<tr>
<td>16</td>
<td>.025</td>
<td>.924</td>
<td>Positive</td>
</tr>
<tr>
<td>17</td>
<td>.585</td>
<td>.918</td>
<td>Positive</td>
</tr>
<tr>
<td>18</td>
<td>.679</td>
<td>.917</td>
<td>Positive</td>
</tr>
<tr>
<td>19</td>
<td>.139</td>
<td>.924</td>
<td>Positive</td>
</tr>
<tr>
<td>20</td>
<td>.648</td>
<td>.917</td>
<td>Positive</td>
</tr>
<tr>
<td>21</td>
<td>.341</td>
<td>.922</td>
<td>Positive</td>
</tr>
<tr>
<td>22</td>
<td>.520</td>
<td>.919</td>
<td>Positive</td>
</tr>
<tr>
<td>23</td>
<td>.482</td>
<td>.920</td>
<td>Positive</td>
</tr>
<tr>
<td>24</td>
<td>.219</td>
<td>.924</td>
<td>Positive</td>
</tr>
<tr>
<td>25</td>
<td>.807</td>
<td>.915</td>
<td>Positive</td>
</tr>
<tr>
<td>26</td>
<td>.438</td>
<td>.920</td>
<td>Positive</td>
</tr>
<tr>
<td>27</td>
<td>.615</td>
<td>.918</td>
<td>Positive</td>
</tr>
<tr>
<td>28</td>
<td>.682</td>
<td>.917</td>
<td>Positive</td>
</tr>
<tr>
<td>29</td>
<td>.715</td>
<td>.918</td>
<td>Positive</td>
</tr>
<tr>
<td>30</td>
<td>.419</td>
<td>.921</td>
<td>Positive</td>
</tr>
</tbody>
</table>
3.5.2 Pilot Testing of Leadership Practices Inventory Observers (LPI-O)

Leadership Practices Inventory Observers (LPI-O) is about the perceptions of secondary schools teachers about the leadership behaviour of their principals. For the purpose of pilot testing forty Secondary School Teachers (SSTs) randomly selected participated in this survey. This number of participants was other than research sample. For this purpose 20 teachers from public and 20 from private secondary schools were selected.

With reference to pilot testing a description is given below in Table 3.7. This table presents the total number of items of the questionnaire, their mean, standard deviation, and Cronbach Alpha Reliability in Pakistani context.

Table 3.7

<table>
<thead>
<tr>
<th>No.of Items</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>1.3</td>
<td>17.8</td>
<td>.86</td>
</tr>
</tbody>
</table>

Items used to find out the reliability regarding Leadership Practice Inventory Observer, the Leadership Behaviour of secondary school principals as described by themselves are presented in Table 3.8. Infact, this table describes the co-relation of total items, Cronbach Alpha Reliability of the item-if items deleted, and the nature of the item statement rather it is positive or negative for all 30 items.
Table 3.8

*Detail of Items for Leadership Practices Inventory Observer*

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item-Total Correlation</th>
<th>Cronbach's Alpha (if Item Deleted)</th>
<th>Nature of Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.325</td>
<td>.858</td>
<td>Positive</td>
</tr>
<tr>
<td>2</td>
<td>.452</td>
<td>.855</td>
<td>Positive</td>
</tr>
<tr>
<td>3</td>
<td>.631</td>
<td>.850</td>
<td>Positive</td>
</tr>
<tr>
<td>4</td>
<td>.366</td>
<td>.858</td>
<td>Positive</td>
</tr>
<tr>
<td>5</td>
<td>.566</td>
<td>.851</td>
<td>Positive</td>
</tr>
<tr>
<td>6</td>
<td>.313</td>
<td>.859</td>
<td>Positive</td>
</tr>
<tr>
<td>7</td>
<td>.342</td>
<td>.858</td>
<td>Positive</td>
</tr>
<tr>
<td>8</td>
<td>.466</td>
<td>.855</td>
<td>Positive</td>
</tr>
<tr>
<td>9</td>
<td>.329</td>
<td>.858</td>
<td>Positive</td>
</tr>
<tr>
<td>10</td>
<td>.211</td>
<td>.861</td>
<td>Positive</td>
</tr>
<tr>
<td>11</td>
<td>.399</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>12</td>
<td>.595</td>
<td>.851</td>
<td>Positive</td>
</tr>
<tr>
<td>13</td>
<td>.397</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>14</td>
<td>.462</td>
<td>.855</td>
<td>Positive</td>
</tr>
<tr>
<td>15</td>
<td>.287</td>
<td>.859</td>
<td>Positive</td>
</tr>
<tr>
<td>16</td>
<td>.420</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>17</td>
<td>.465</td>
<td>.855</td>
<td>Positive</td>
</tr>
<tr>
<td>18</td>
<td>.586</td>
<td>.850</td>
<td>Positive</td>
</tr>
<tr>
<td>19</td>
<td>.219</td>
<td>.862</td>
<td>Positive</td>
</tr>
<tr>
<td>20</td>
<td>.150</td>
<td>.863</td>
<td>Positive</td>
</tr>
<tr>
<td>21</td>
<td>.260</td>
<td>.861</td>
<td>Positive</td>
</tr>
<tr>
<td>22</td>
<td>.257</td>
<td>.860</td>
<td>Positive</td>
</tr>
<tr>
<td>23</td>
<td>.137</td>
<td>.863</td>
<td>Positive</td>
</tr>
<tr>
<td>24</td>
<td>.476</td>
<td>.854</td>
<td>Positive</td>
</tr>
<tr>
<td>25</td>
<td>.427</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>26</td>
<td>.501</td>
<td>.854</td>
<td>Positive</td>
</tr>
<tr>
<td>27</td>
<td>.420</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>28</td>
<td>.463</td>
<td>.855</td>
<td>Positive</td>
</tr>
<tr>
<td>29</td>
<td>.402</td>
<td>.856</td>
<td>Positive</td>
</tr>
<tr>
<td>30</td>
<td>.213</td>
<td>.861</td>
<td>Positive</td>
</tr>
</tbody>
</table>
3.5.3 Pilot Testing of Organizational Health Inventory

The bilingual version of Organizational Health Inventory that is Urdu and English language was administered on the students of 10th class. Reason to translate this inventory in Urdu was to make it understandable for students. Pertinent to mention is that earlier discussed inventories were administered over teachers, therefore, English to Urdu translation was not needed for them. Regarding pilot testing of this inventory 200 hundred students were selected randomly to administer it. Out of them there were 50 male students from two public schools and 50 from two private schools, and accordingly 50 female students from two public schools and 50 students from two private schools. The Reliability of the scale was found as 0.71. During data collection for pilot study, the researcher felt that respondents were facing problems in understanding some of the statements.

Therefore, some changes were made in translation, and was got validated by bilingual experts in accordance with the understanding level of the students and local culture. The instrument with rephrased items was again administered on the same number of students from other schools selected randomly out of the same categories. Cronbach’s Alpha Reliability value of the scale increased from 0.71 to 0.83 as a result of revising statements.

With reference to pilot testing of the School Organizational Health Inventory; a detailed description is given below in the Table 3.9. This table describes the total number of items of the questionnaire, their mean, standard deviation, and Cronbach Alpha Reliability for this inventory in Pakistani context. Participants of this pilot survey were both male & female from public and private secondary schools.
Table 3.9

Reliability of Organizational Health Inventory

<table>
<thead>
<tr>
<th>No. of Items</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>109.40</td>
<td>16.31</td>
<td>.83</td>
</tr>
</tbody>
</table>

Items used to find out the reliability regarding organizational health for schools perceptions of the students are described in detail in the Table 3.10. Infect, this table describes the co-relation of total items, Cronbach Alpha Reliability of the item-if items deleted, and the nature of the item statement rather it is positive or negative for all 37 items.
Table 3.10

*Detail of Organizational Health Inventory Items*

<table>
<thead>
<tr>
<th>Item No</th>
<th>Item-Total Correlation</th>
<th>Cronbach's Alpha (if Item Deleted)</th>
<th>Nature of the Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.240</td>
<td>.827</td>
<td>Positive</td>
</tr>
<tr>
<td>2</td>
<td>.148</td>
<td>.829</td>
<td>Positive</td>
</tr>
<tr>
<td>3</td>
<td>.462</td>
<td>.821</td>
<td>Positive</td>
</tr>
<tr>
<td>4</td>
<td>.402</td>
<td>.823</td>
<td>Positive</td>
</tr>
<tr>
<td>5</td>
<td>.472</td>
<td>.821</td>
<td>Positive</td>
</tr>
<tr>
<td>6</td>
<td>.402</td>
<td>.823</td>
<td>Negative</td>
</tr>
<tr>
<td>7</td>
<td>.307</td>
<td>.825</td>
<td>Positive</td>
</tr>
<tr>
<td>8</td>
<td>.419</td>
<td>.822</td>
<td>Positive</td>
</tr>
<tr>
<td>9</td>
<td>.430</td>
<td>.822</td>
<td>Positive</td>
</tr>
<tr>
<td>10</td>
<td>.416</td>
<td>.822</td>
<td>Positive</td>
</tr>
<tr>
<td>11</td>
<td>.397</td>
<td>.823</td>
<td>Positive</td>
</tr>
<tr>
<td>12</td>
<td>.287</td>
<td>.826</td>
<td>Positive</td>
</tr>
<tr>
<td>13</td>
<td>.301</td>
<td>.825</td>
<td>Positive</td>
</tr>
<tr>
<td>14</td>
<td>.245</td>
<td>.827</td>
<td>Negative</td>
</tr>
<tr>
<td>15</td>
<td>.240</td>
<td>.843</td>
<td>Positive</td>
</tr>
<tr>
<td>16</td>
<td>.345</td>
<td>.824</td>
<td>Positive</td>
</tr>
<tr>
<td>17</td>
<td>.550</td>
<td>.819</td>
<td>Positive</td>
</tr>
<tr>
<td>18</td>
<td>.191</td>
<td>.828</td>
<td>Positive</td>
</tr>
<tr>
<td>19</td>
<td>.341</td>
<td>.824</td>
<td>Negative</td>
</tr>
<tr>
<td>20</td>
<td>.486</td>
<td>.821</td>
<td>Positive</td>
</tr>
<tr>
<td>21</td>
<td>.504</td>
<td>.820</td>
<td>Positive</td>
</tr>
<tr>
<td>22</td>
<td>.391</td>
<td>.823</td>
<td>Positive</td>
</tr>
<tr>
<td>23</td>
<td>.298</td>
<td>.826</td>
<td>Positive</td>
</tr>
<tr>
<td>24</td>
<td>.251</td>
<td>.827</td>
<td>Positive</td>
</tr>
<tr>
<td>25</td>
<td>.455</td>
<td>.821</td>
<td>Negative</td>
</tr>
<tr>
<td>26</td>
<td>.490</td>
<td>.821</td>
<td>Positive</td>
</tr>
<tr>
<td>27</td>
<td>.200</td>
<td>.846</td>
<td>Positive</td>
</tr>
<tr>
<td>28</td>
<td>.228</td>
<td>.827</td>
<td>Positive</td>
</tr>
<tr>
<td>29</td>
<td>.466</td>
<td>.821</td>
<td>Negative</td>
</tr>
<tr>
<td>30</td>
<td>.432</td>
<td>.822</td>
<td>Negative</td>
</tr>
<tr>
<td>31</td>
<td>.248</td>
<td>.827</td>
<td>Positive</td>
</tr>
<tr>
<td>32</td>
<td>.350</td>
<td>.824</td>
<td>Positive</td>
</tr>
<tr>
<td>33</td>
<td>.377</td>
<td>.824</td>
<td>Positive</td>
</tr>
<tr>
<td>34</td>
<td>.451</td>
<td>.822</td>
<td>Positive</td>
</tr>
<tr>
<td>35</td>
<td>.423</td>
<td>.823</td>
<td>Positive</td>
</tr>
<tr>
<td>36</td>
<td>.228</td>
<td>.827</td>
<td>Positive</td>
</tr>
<tr>
<td>37</td>
<td>.068</td>
<td>.832</td>
<td>Negative</td>
</tr>
</tbody>
</table>
3.5.4 Piloting of the Subscales of Leadership Practices Inventory Self

Leadership Practices Inventory Self and Observer consist of five subscales; Model the way; Inspired the shared vision; Challenge the process; Enable others to act; and Encourage the heart. These five subscales for LPI-S are given in Table 3.11. Moreover, number of items, serial number in final scale and Cronbach Alpha Reliability of each of the subscales is also presented.

Table 3.11

<table>
<thead>
<tr>
<th>LPI-S Factors / Sub-scales</th>
<th>Number of Items</th>
<th>Serial number in final scale</th>
<th>Cronbach Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model the way</td>
<td>6</td>
<td>1,6,11,16,21,26</td>
<td>0.73</td>
</tr>
<tr>
<td>Inspired the shared vision</td>
<td>6</td>
<td>2,7,12,17,22,27</td>
<td>0.81</td>
</tr>
<tr>
<td>Challenge the process</td>
<td>6</td>
<td>3,8,13,18,23,28</td>
<td>0.79</td>
</tr>
<tr>
<td>Enable others to act</td>
<td>6</td>
<td>4,9,14,19,24,29</td>
<td>0.80</td>
</tr>
<tr>
<td>Encourage the heart</td>
<td>6</td>
<td>5,10,15,20,25,30</td>
<td>0.86</td>
</tr>
</tbody>
</table>
3.5.5 Pilot Testing of the Subscales of Leadership Practices Inventory Observer

As described earlier that Leadership Practices Inventory Self and Observer consists of five subscales; Model the way; Inspired the shared vision; Challenge the process; Enable others to act and Encourage the heart. These five subscales for LPI-O are described in Table 3.12. Where, details of number of items, serial number in final scale, and Cronbach Alpha Reliability of each of the subscales is given.

Table 3.12

*Cronbach's Alpha on Values for Subscales of Leadership Practices Inventory Observer*

<table>
<thead>
<tr>
<th>LPI-S Factors</th>
<th>Number of Items</th>
<th>Serial number in final scale</th>
<th>Cronbach Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model the way</td>
<td>6</td>
<td>1,6,11,16,21,26</td>
<td>0.84</td>
</tr>
<tr>
<td>Inspired the shared vision</td>
<td>6</td>
<td>2,7,12,17,22,27</td>
<td>0.89</td>
</tr>
<tr>
<td>Challenge the process</td>
<td>6</td>
<td>3,8,13,18,23,28</td>
<td>0.90</td>
</tr>
<tr>
<td>Enable others to act</td>
<td>6</td>
<td>4,9,14,19,24,29</td>
<td>0.89</td>
</tr>
<tr>
<td>Encourage the heart</td>
<td>6</td>
<td>5,10,15,20,25,30</td>
<td>0.86</td>
</tr>
</tbody>
</table>
3.5.6 Pilot Testing of Subscales of OHI

Organizational Health Inventory consists of five subscales; Institutional integrity; Collegial leadership; Resource influence; Teacher affiliation and Academic emphasis. All these five subscales were pilot tested in Pakistani context and is presented in Table 3.13.

Moreover, Organizational Health Inventory factors with their relevant item numbers, serial numbers in final scale and Cronbach Alpha values are presented here in this table.

Table 3.13

*Cronbach’s Alpha Values for subscales of Organizational Health Inventory*

<table>
<thead>
<tr>
<th>OHI-E Factors</th>
<th>Number of items</th>
<th>Serial number in final scale</th>
<th>Cronbach Alpha Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Integrity (II)</td>
<td>6</td>
<td>8,14,19,25,29,30</td>
<td>0.93</td>
</tr>
<tr>
<td>Collegial Leadership (CL)</td>
<td>10</td>
<td>1,3,4,10,11,15,17,21,26,34</td>
<td>0.90</td>
</tr>
<tr>
<td>Resource Influence (RI)</td>
<td>7</td>
<td>2,5,9,12,16,20,22</td>
<td>0.83</td>
</tr>
<tr>
<td>Teacher Affiliation (TA)</td>
<td>9</td>
<td>13,23,27,28,32,33,35,36,37</td>
<td>0.91</td>
</tr>
<tr>
<td>Academic Emphasis (AE)</td>
<td>5</td>
<td>6,7,18,24,31</td>
<td>0.88</td>
</tr>
</tbody>
</table>
3.6 Data Collection

After pilot study the data were collected with the permission of principals and class teacher of the concerned schools. Researcher personally visited all the 64 schools included in the sample and administered the tools LPI-Self, LPI-Observer and OHI-E.

After brief introduction by the researcher, respondents were briefed about the purpose of research. It was explicitly conveyed to the respondents that this data collection would not have any effect on the school results or performance appraisal. This briefing remained helpful for them to work in a congenial environment. The researcher distributed the inventories among respondents of the study. Questionnaires for students were administered in their classrooms. Every respondent was requested to write his/her full name and school’s name. It was ensured that students have filled the background information clearly and completely. Later on researcher collected the students’ final examination Board of Intermediate and Secondary Education examination roll numbers from school record. These were used to obtain their marks in final examination. The data collection, especially from students was not possible in a single continuous session due to school examinations during these months. That is why it took about two months to complete the task.
3.7 Data Analysis

Collected data for this study was quantitative in nature. Descriptive statistics were used to describe the sample and group scores in terms of central tendency (i.e., mean scores, standard deviations, and sample size). Similarly, mean scores and standard deviations were calculated for the school related demographic characteristics i.e. type of school like public and private, and gender of the respondents. In order to analysis the statistical differences between the scores of private and public schools and, male and female schools inferential analysis were conducted.

\( t \)-statistics was used to find out the significant difference between Leadership Behaviour of the secondary school principals in terms of their gender and type of schools i.e. public and private. Difference between School Organizational Health on the basis of three criteria i.e. gender, type of schools public and private, and discipline adopted by students science and arts group were also calculated accordingly.

Relationship between Leadership Behaviour of secondary school principals, School Organizational Health and Students’ Academic Achievement were calculated by applying Pearson Correlations Coefficient. Moreover, relationship for subscales of Leadership Behaviour and School Organizational Health with achievement was also checked accordingly.

As described earlier that selected sample from each school was one principal, two teachers and thirty students and both the teachers were from the same schools who have been teaching to 10th class section. All these three types of respondents formed three separate groups. Thus 128 teachers accumulate a group of 64 that became equal to the number of principals. Accordingly mean scores were computed for 30 students of a class to form one group and in this way whole number of selected sample i.e. 1920 students were distributed into 64 groups. Each group comprised 30 students.
To see the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement, simple linear regressions were applied.
CHAPTER IV  

Analysis and Interpretation of Data  

This chapter is about analysis and interpretation data. As it has been discussed in Chapter 3 that data were collected from male and female principals, teachers and 10th grade science and arts students of public and private secondary schools from four districts of Punjab province. To measure the leadership behaviour of the secondary school leaders, Leadership Practices Inventory (LPI) developed and used by Kouzes & Posner (2003), was used in the study. Whereas, to measure the Organizational Health of the secondary schools, Organizational Health Inventory (OHI) developed and used by Hoy, Tarter, and Kottkamp (1991), was used. For Students’ Academic Achievement, achievement scores of the students were obtained from the annual examination (2013) results of Boards of Intermediate and Secondary Education in Punjab. Statistical Package for Social Sciences (SPSS) was used to analysis the data. Results obtained from analysis have been presented in three sections according to the sequence of research questions.

Section one presents correlations among the Leadership Behaviour of secondary school principals as stated by themselves and Students’ Academic Achievement, and Leadership Behaviour of principals as observed by secondary school teachers. These teachers played the role of observers of their respective principals which were included in the study. Moreover, a correlation between Leadership Behaviour of principals, School Organizational Health and Students’ Academic Achievement is presented in this section. Accordingly, a comparison of male and female secondary school principals’ Leadership Behaviour according to their own opinion and as described by the observers is stated here in this section. Similarly, a comparison
of public and private secondary school principals’ Leadership Behaviour as described by themselves and as observed by the teachers has been presented.

For the purpose of analysis in this section, mean scores were calculated by applying descriptive statistics. Moreover, t test was used to find out the significant difference between Leadership Behaviour of male and female principals, and of public and private school principals. Difference between the influence of Leadership Behaviour of principals towards their Students’ Academic Achievement as stated by themselves and as observed by teachers has been calculated using t test.

Section two is comprised of the results of effect of Leadership Behaviour of principals and its subscales on the Students’ Academic Achievement. The major question of the study i.e. finding the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement is also presented here in this section. Furthermore, the effect of both of the independent variables on Students’ Academic Achievement has been discussed here. A detailed description about the use of Regression Analysis to see the effect of Leadership Behaviour on Students’ Academic Achievement has been given in this section. Moreover, in this section Pearson Correlation Coefficient has been used to find out the relationship between different variables as discussed in the above paragraph. Regression Analysis has been applied to explore the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement.

In section three, comparisons on the basis of gender, type of school, science and arts group has been presented. Effect of School Organizational Health and its subscales on Students’ Academic Achievement is also included in this section.

Before presenting the results, the demographic variables involved in the study are given below in Table 4.1.
Table 4.1

Demographic Characteristics of Respondents

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Respondents</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Principals</td>
<td>Teachers/Observers</td>
<td>Students</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>27</td>
<td>54</td>
<td>995</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>37</td>
<td>74</td>
<td>925</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>128</td>
<td>1920</td>
<td></td>
</tr>
<tr>
<td>Type of schools</td>
<td>Public</td>
<td>32</td>
<td>64</td>
<td>960</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>32</td>
<td>64</td>
<td>960</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>128</td>
<td>1920</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.1 shows the distribution of respondents regarding gender and type of their schools. Five female principals were serving in boys private secondary schools instead of male leaders. Therefore, the number of female principal respondents was greater than male principals. Accordingly, female teacher respondents were also more in number as compared to the male teachers. Whereas, the number of female student respondents was lower than that of the male student respondents. Moreover, this table shows that the number of respondents from private and public schools was equal.
Table 4.2

Descriptive Statistics on the Variables Involved in the Study

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of Subjects</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principals</td>
<td>64</td>
<td>1.58</td>
</tr>
<tr>
<td>Teachers</td>
<td>128</td>
<td>1.67</td>
</tr>
<tr>
<td>Students’ Academic Achievement (SA)</td>
<td>1920</td>
<td>773.77</td>
</tr>
<tr>
<td>Leadership Behaviour of Principals as described by them (LBP-S)</td>
<td>64</td>
<td>4.53</td>
</tr>
<tr>
<td>Leadership Behaviour of Principals as described by teachers (LBP-O)</td>
<td>128</td>
<td>2.80</td>
</tr>
<tr>
<td>School Organizational Health (SOH)</td>
<td>1920</td>
<td>2.92</td>
</tr>
</tbody>
</table>

Table 4.2 represents the descriptive statistics of all of the variables involved in the study at hand. Overall mean score value for principals was 1.58, while for teachers was 1.67. Mean score value was the same for public and private secondary school principals and teachers. Mean score achieved by students in 10th grade examination in the Board of Intermediate & Secondary Education was 773.77. Mean score for Leadership Behaviour of principals as described by them was 4.53 and as observed by the teacher was 2.80. Whereas, the highest mean score for the scale was 6. Mean score for School Organizational Health was 2.92, while highest mean score for this scale was 4.
4.1 Results

Results are presented according to the sequence of research questions; therefore, for this purpose this chapter is further divided into three sections as stated below.

4.1.1 Section-1 Descriptive Statistics, Pearson Coefficient Correlation and t-test for Comparison of Leadership Behaviour

In this section, analysis about correlation and difference regarding Leadership Behaviour and Students’ Academic Achievement has been presented.

Research Question-1

Is there any relationship between leadership behavior of principals and Students’ Academic Achievement?

The null hypothesis for this research question is stated below;

\( H_0 \) There is no significant correlation between Leadership Behaviour of principals and Students Academic Achievement.

In order to find out relationship between Leadership Behaviour of principals as described by them and Students’ Academic Achievement, Pearson Coefficient Correlation was run and results obtained are presented in Table 4.3.
Table 4.3

Pearson Coefficient Correlation between Leadership Behavior of Principals (LBP-S) as stated by themselves & Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Academic Achievement (SA)</td>
<td>1920</td>
<td>773.77</td>
<td>94.34</td>
<td>0.65**</td>
<td>.00</td>
</tr>
<tr>
<td>Leadership behavior of principals as described by them (LBP-S)</td>
<td>64</td>
<td>4.53</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**, P< 0.01

Table 4.3 shows that Pearson Coefficient Correlation r = 0.65, is significant at p<0.01.

According to Hinkle, Wiersma & Jurs (2003) scale for interpreting the Pearson Coefficient Correlation, Table 4.4 describes the levels of correlation.

Table 4.4

Interpretation of Pearson Coefficient Correlation

<table>
<thead>
<tr>
<th>Size of score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>.90 to 1.00</td>
<td>Very high positive (negative) correlation</td>
</tr>
<tr>
<td>.70 to .90</td>
<td>High positive (negative) correlation</td>
</tr>
<tr>
<td>.50 to .70</td>
<td>Moderate positive (negative) correlation</td>
</tr>
<tr>
<td>.30 to .50</td>
<td>Low positive (negative) correlation</td>
</tr>
<tr>
<td>.00 to .30</td>
<td>Little if any correlation</td>
</tr>
</tbody>
</table>
According to Table 4.4, there was moderate positive correlation between Students’ Academic Achievement and Leadership Behaviour of principals. Thus, the hypothesis claiming, no significant correlation between Leadership Behaviour and Students’ Academic Achievement is therefore, rejected. Hence, correlation between Leadership Behaviour and Students’ Academic Achievement exists.

**Research Question-2**

Is there any relationship between leadership behavior of principals and Students’ Academic Achievement according to the observation of teachers?

The null hypothesis for this research question is as under;

**Ho**  There is no significant correlation between Leadership Behaviour of principals and Students’ Academic Achievement according to the observation of teachers.

In order to find out relationship between Leadership Behaviour of principals as observed by teachers and the Students’ Academic Achievement, Pearson Coefficient Correlation was run. The results of this analysis are presented in Table 4.5 given below;
Table 4.5

*Pearson Coefficient Correlation between Leadership Behavior of principals as described by teachers (LBP-O) & Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Academic Achievement (SA)</td>
<td>1920</td>
<td>773.77</td>
<td>94.34</td>
<td>0.25*</td>
<td>.04</td>
</tr>
<tr>
<td>Leadership behavior of principals as observed by teachers (LBP-O)</td>
<td>128</td>
<td>2.80</td>
<td>1.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

It is reflected from Table 4.5 that the value of Pearson r = 0.25 at significance p<0.05, therefore, according to Hinkle, Wiersma & Jurs (2003) scale table, a very little correlation exists between Leadership Behaviour of principals as observed by their school teachers and Students’ Academic Achievement. The null hypothesis claiming, no significant correlation between Leadership Behaviour of principals as described by teachers and Students’ Academic Achievement is therefore rejected.
Research Question-3

Is there any relationship between leadership behavior of principals’ subscales; Model the Way, Inspired the Shared Vision, Challenge the Process, Encourage to Act, and Encourage the Heart and Students’ Academic Achievement?

The null hypothesis for this research question is stated as bellow;

**Ho** There is no significant correlation between all five subscales of Leadership Behaviour; Model the Way; Inspired the Shared Vision; Challenge the Process; Encourage to Act; and Encourage the Heart and Students’ Academic Achievement

Pearson Coefficient Correlation test was run with regard to this hypothesis and the results thus obtained are presented in Table 4.6.
Table 4.6

*Pearson Correlation Coefficients between subscales of Leadership Behavior of Secondary School Principals and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Academic Achievement (SA)</td>
<td>1920</td>
<td>773.77</td>
<td>94.34</td>
<td>1</td>
</tr>
<tr>
<td>Model the Way (MW)</td>
<td>64</td>
<td>4.05</td>
<td>.83</td>
<td>.33**</td>
</tr>
<tr>
<td>Inspired the Shared Vision (ISV)</td>
<td>64</td>
<td>3.59</td>
<td>1.08</td>
<td>.27*</td>
</tr>
<tr>
<td>Challenge the Process (CHP)</td>
<td>64</td>
<td>3.59</td>
<td>1.09</td>
<td>.27*</td>
</tr>
<tr>
<td>Encourage to Act (EA)</td>
<td>64</td>
<td>3.36</td>
<td>1.39</td>
<td>.56**</td>
</tr>
<tr>
<td>Encourage the Heart (EH)</td>
<td>64</td>
<td>4.34</td>
<td>.84</td>
<td>.39**</td>
</tr>
</tbody>
</table>

*p<0.05, **p<0.01

Table 4.6 shows that Pearson Coefficient Correlation value between Model the Way and Students’ Academic Achievement is r = 0.33 at significance p<0.01. According to Hinkle, et al. (2003) interpretation table there is a positive low correlation between them. Therefore, for these two variables, null hypothesis is rejected because a significant correlation exists between Model the Way and Students’ Academic Achievement.

Similarly, Pearson Coefficient Correlation r = 0.27 is significant at p<0.05 for correlation between Inspired the Shared Vision and Students’ Academic Achievement. Thus, the null hypothesis claiming, no significant correlation between Inspired the Shared Vision and students’ academic achievement is, therefore, rejected. It is pertinent to mention here that, no doubt,
hypothesis is rejected but according to Hinkle, et al. (2003) interpretation table, there exists a very little correlation between them.

Furthermore, $r = 0.27$ at $p<0.05$ for correlation between Challenge the Process and Students’ Academic Achievement. Thus, the null hypothesis claiming no significant correlation between Challenge the Process and Students’ Academic Achievement is, therefore, rejected. It is similar to above mentioned variable Inspired the Shared Vision, as hypothesis is rejected here but a very little correlation exists between them.

This table also shows that Pearson Coefficient Correlation for Encourage to Act is $= 0.56$ at significance $p<0.01$, which means that there was a moderate positive correlation between Encourage to Act and Students’ Academic Achievement. So, the null hypothesis claiming, no significant correlation between Encourage to Act and Students’ Academic Achievement is, therefore, rejected.

Likewise, Pearson Correlation $r$ value for Encourage the Heart was $0.39$ at significance $p<0.01$, which shows that there was a low positive correlation between Encourage the Heart and Students’ Academic Achievement. Thus, the null hypothesis claiming no significant correlation between Encourage the Heart and Students’ Academic Achievement is, therefore, rejected.
**Research Question-4**

Is there any relationship between Leadership Behaviour of secondary school principals, School Organizational Health and Students’ Academic Achievement?

The null hypothesis for this research question is stated as under;

**Ho** There is no significant relationship between Leadership Behaviour of principals, School Organizational Health and Students’ Academic Achievement.

In order to find out the correlation between Leadership Behaviour, organizational health and Students’ Academic Achievement, Pearson Coefficient Correlation test was run, and the results obtained are presented in Table 4.7.

**Table 4.7**

*Pearson Coefficient Correlation between Leadership Behaviour of principals, School Organizational Health and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>LBP-S</th>
<th>SOH</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Behaviour of</td>
<td>64</td>
<td>4.53</td>
<td>0.96</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Principals described by</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>themselves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Organizational Health</td>
<td>1920</td>
<td>2.92</td>
<td>0.33</td>
<td>.62**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Students’ Academic</td>
<td>1920</td>
<td>773.77</td>
<td>94.34</td>
<td>.66**</td>
<td>.91**</td>
<td>1</td>
</tr>
<tr>
<td>Achievement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01**
Table 4.7 describes that there was a significant correlation between Leadership Behaviour of secondary school principals and Students’ Academic Achievement as $r = 0.66$ at significance $p<0.01$, which is moderate positive correlation according to Hinkle, et al. (2003). The null hypothesis claiming no significant correlation between Leadership Behaviour and Students’ Academic Achievement, is therefore, rejected.

Furthermore, Pearson Coefficient Correlation for correlation between School Organizational Health and Students’ Academic Achievement is 0.91 that is significant at $p<0.01$. This is a very high positive correlation. Thus, the null hypothesis claiming no significant correlation between School Organizational Health and students’ Academic Achievement is, therefore, rejected.

Accordingly, moderate positive correlation exists between Leadership Behaviour of secondary school principals and School Organizational Health because Pearson Coefficient Correlation value is 0.62 that is significant at $p<0.01$. Thus, the null hypothesis claiming, no significant correlation between Leadership Behaviour and School Organizational Health is, therefore, rejected.

**Research Question-5**

Is there any difference in male and female principals’ leadership behavior at secondary level?

The null hypothesis for this research question is stated as under;

**Ho** There is no significant difference in male and female principals’ Leadership Behaviour.

In order to find out any significant difference between male and female principals’ Leadership Behaviour, t test was used for this comparison, and the results obtained are presented in Table 4.8.
Table 4.8

*Comparison of Male and Female Principals’ Leadership Behaviour*

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>27</td>
<td>4.4</td>
<td>.60</td>
<td></td>
<td>.82</td>
<td>.42</td>
</tr>
<tr>
<td>Female</td>
<td>37</td>
<td>4.5</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.8 shows that there was no significant difference between Leadership Behaviour of male and female principals as $t = -0.82$ and $p > 0.01$ with $df = 62$. Thus, hypothesis claiming, no significant difference between male and female principals Leadership Behaviour is, therefore, accepted. Since mean score for male secondary school principals is 4.4 and for female principals it is 4.5 which is approximately equal. Accordingly, standard deviation for male principals is 0.60 and for female principals is 0.76. Hence, male and female principals behave similarly.

**Research Question -6**

Is there any difference in public and private secondary school principals’ leadership behavior?

The null hypothesis for this research question is framed as under;

**Ho**  There is no significant difference between public and private secondary schools principal Leadership Behaviour.

In order to find out difference between public and private secondary schools principals’ Leadership Behaviour, t test was run on the collected data by using SPSS, and the results gained are presented in Table 4.9.
Table 4.9

Comparison of Public and Private Principals’ Leadership Behaviour

<table>
<thead>
<tr>
<th>Type of Schools</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>32</td>
<td>4.6</td>
<td>.76</td>
<td>62</td>
<td>.85</td>
<td>.39</td>
</tr>
<tr>
<td>Private</td>
<td>32</td>
<td>4.4</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.9 describes that t-value (0.85) with df (62) was not significant at p>0.01. Since there is no significant difference in mean score values of public school principals Leadership Behaviour that is 4.6 and the private schools’ principals’ Leadership Behaviour which is 4.4. Similarly, standard deviation value for public school principals’ Leadership Behaviour is 0.76, and for private school principals’ Leadership Behaviour is 0.62. Thus, the null hypothesis claiming, no significant difference between public and private secondary school principals’ Leadership Behaviour is, therefore, accepted. Hence, public and private secondary school principals adopted similar Leadership Behaviour.

**Research Question-7**

Is there any difference in Leadership Behaviour of secondary school principals as stated by themselves and as observed by teachers?

The null hypothesis for this research question is stated as under:
There is no significant difference in Leadership Behaviour of principals as described by themselves and as described by the teachers of their schools.

In order to find out any significant difference between Leadership Behaviour of principals as described by themselves and as described by the teachers, t-statistics was applied to compare the means of both types of respondents i.e. principals and teachers. Results gained from this analysis are presented in Table 4.10.

Table 4.10

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Behavior of Principals Self (LBP-S)</td>
<td>64</td>
<td>4.53</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership Behavior of Principals as described by Observers (LBP-O)</td>
<td>64</td>
<td>2.80</td>
<td>1.22</td>
<td>63</td>
<td>11.37*</td>
<td>.00</td>
</tr>
</tbody>
</table>

*p<0.01

Table 4.10 describes that mean score for Leadership Behaviour self was 4.53 and for Leadership Behaviour as described by teachers was 2.80, and the highest mean score for this scale was 6. Whereas, SD is 0.69 and 1.22 respectively, and t-value is 11.37 with df = 63 is significant at p<0.01. Hence, there was a significant difference between Leadership Behaviour of secondary school principals as stated by themselves and as described by teachers of their schools. Thus, null hypothesis claiming, no significant difference between Leadership Behaviour
of principals as described by principals themselves and as described by the teachers of their schools, is therefore, rejected.

**Research Question -8**

Is there any difference in male and female principals’ Leadership Behaviour as described by teachers?

The null hypothesis for this research question is as under:

**Ho** There is no significant difference in male and female principals’ Leadership Behaviour as described by teachers.

In order to find out the difference between male and female principals Leadership Behaviour as described by teachers, t test was applied on the collected data using SPSS, and results obtained from this analysis are presented in Table 4.11.
Table 4.11

Comparison of Male and Female Principals’ Leadership Behaviour as described by the teachers

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>21</td>
<td>4.34</td>
<td>.64</td>
<td></td>
<td>-1.57</td>
<td>.12</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>4.63</td>
<td>.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

Table 4.11 describes that there was no significant difference between male and female principals’ Leadership Behaviour as described by teachers, because t-value is -1.57 whereas p>0.01, and, df is 62. Mean score value for male secondary school principals according to observers is 4.34 and for female principals is 4.63. Similarly, standard deviation for male principals as described by the observers is 0.64 and for female principals is 0.70. Thus, the null hypothesis claiming, no significant difference between male and female principals’ Leadership Behaviour as described by teachers, is therefore, accepted. Hence, according to teachers, male and female secondary school principals behave similarly.
Research Question-9

Is there any difference in public and private secondary school principals’ Leadership Behaviour as described by teachers?

The null hypothesis for this research question is stated as under:

\[ \text{Ho} \quad \text{There is no significant difference in public and private secondary school principals’ Leadership Behaviour as described by teachers of their schools.} \]

In order to find out any significant difference in private and public school principals’ Leadership Behaviour as described by teachers of their schools, t statistics was run, and results obtained are presented in Table 4.12 given below.

Table 4.12

<table>
<thead>
<tr>
<th>Type of schools</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>32</td>
<td>4.61</td>
<td>.76</td>
<td>62</td>
<td>.85</td>
<td>.39</td>
</tr>
<tr>
<td>Private</td>
<td>32</td>
<td>4.46</td>
<td>.62</td>
<td>62</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.12 describes that \( t = 0.85 \) with \( df = 62 \), that is not significant because \( p > 0.01 \).

Hence, there was no significant difference between public and private secondary school
principals Leadership Behaviour according to teachers of their schools. Moreover, mean score value for public school principals is 4.61 and for private school principals is 4.46. Accordingly standard deviation for public school principals is 0.76 and for private school principals is 0.62. These values of mean score and standard deviations describes that there was no significant difference between them. So, the null hypothesis is accepted here. Hence, public and private secondary school leaders behave similarly according to the opinions of teachers.
4.1.2 Section-II Effect of Leadership and School Organizational Health on Students’ Academic Achievement – Regression Analysis

In this section, the effect of Leadership Behaviour of secondary school principals and School Organizational Health on Students’ Academic Achievement has been described. Regression Analysis was applied to find out significant effect of Leadership Behaviour, and School Organizational Health on Students’ Academic Achievement. It is pertinent to mention here that, no significant evidence of violation of assumption of normality, linearity, and homoscedasticity has been observed in this regard. Examination of residuals scatter plots provided a test of assumptions of normality, linearity, and homoscedasticity between predicted dependent variable scores (students achievement) and errors of prediction.

The histogram of the data displays an approximate normal distribution which is presented in Figure 4.1, while the P-P plot showed a linear relationship Figure 4.2 and the residual plot displayed no set patterns and, therefore, the assumption of homoscedasticity or homogeneity of variance of Leadership Behaviour and School Organizational Health were not violated.

Assumptions of analysis are that the residuals which are differences between obtained and predicted dependent variables i.e. dependent variable (DV) scores are normally distributed about the predicted DV scores. Whereas, residuals have a straight line relationship with predicted DV scores, and that variance of the residuals about predicted DV scores is the same for all predicted scores.

However, these assumptions are met; the residuals appear as in Figures 4.3 and 4.4. The assumption of homoscedasticity or homogeneity of variance is the assumption that the standard deviations of errors are approximately equal for all predicted dependent variable scores that are presented in these Figures.
Figure 4.1  Histogram of Students Achievement Score (dependent variable)

Figure 4.2  Normal Probability Plot of Regression Standardized Residual
Figure 4.3  Scatter Plot of Regression Standardized Predicted Value


*Dependent Variable: Aggregate Students’ Academic Achievement Score*
Figure 4.4 Scatter Plot of Regression Standardized Predicted Value

*Independent Variable:* School Organizational Health

*Dependent Variable:* Aggregate Students’ Academic Achievement Score
**Research Question No.10**

Is there any effect of Leadership Behaviour of secondary school principals and School Organizational Health on Students’ Academic Achievement?

The null hypothesis for this research question is stated below:

\[ Ho \quad \text{There is no effect of Leadership Behaviour of principals and School Organizational Health on Students’ Academic Achievement.} \]

In order to find out the effect of Leadership Behaviour of principals and School Organizational Health on Students’ Academic Achievement, Multiple Regression Analysis was conducted, and results gained are presented in Tables 4.13 & 4.14.

**Table 4.13**

*Effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.844</td>
<td>0.839</td>
<td>2</td>
<td>164.88</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.13 shows the results of the *F-test* support to the predictive utilities of Leadership Behaviour of Principals (LBP), and School Organizational Health (SOH) on Students’ Academic Achievement, where R-square = 0.844, adjusted R-square = 0.839, F = 164.88 which is significant at p<0.01 with df = 2.
Table 4.14

Coefficient of Students’ Academic Achievement, Leadership Behaviour &
School Organizational Health.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>460.62</td>
<td>32.22</td>
<td>14.29</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>LBP-S</td>
<td>20.83</td>
<td>8.72</td>
<td>.15</td>
<td>2.38</td>
<td>.020</td>
</tr>
<tr>
<td>SOH</td>
<td>79.21</td>
<td>6.25</td>
<td>.81</td>
<td>12.66</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Leadership Behavior of Principals as stated by them (LBP-S)
c. School Organizational Health (SOH)

Table 4.14 reflects the unstandardized coefficients for Students’ Academic Achievement, Leadership Behaviour of secondary school principals and School Organizational Health. For Leadership Behaviour of Principals Self (LBP-S) beta value $\beta^=20.83$, $t=2.38$, and $p>0.01$ was not found statistically significant. Thus null hypothesis claiming, no significant effect of Leadership Behaviour of principals on Students’ Academic Achievement is, therefore, accepted.

Whereas, for School Organizational Health (SOH) beta value $\beta^=79.21$, $t=12.66$, and $p = 0.000$, was statistically significant. Thus, null hypothesis claiming, no significant effect of School Organizational Health on Students’ Academic Achievement is, therefore, rejected.

Moreover, the prediction equation using unstandardized coefficients, for Students’ Academic Achievement is as given bellow:

$$SA = 460.62 + 20.83(LBP) + 79.21(SOH)$$
For a student having mean score for LBP-S = 4.53 and for SOH mean score = 2.92, after putting these values in above equation marks obtained by the students are calculated as under;

Students’ Academic Achievement = 786.27

As $\beta^\_\text{value}$ for SOH is 79.21 that is remarkably greater as compared to the $\beta^\_\text{value}$ for LBP-S which is 20.83. Therefore, it is evident from prediction equation that School Organizational Health has a strong effect on Students’ Academic Achievement as compared to the effect of Leadership Behaviour of secondary school Principals on Students’ Academic Achievement.

Furthermore, according to Table 4.14 standardized $\beta$-value for LSB-S is 0.15 at $p>0.01$ and for SOH is 0.81 at $p<0.01$. Hence, these values strengthen the results of above equation towards addressing this research question. Figures 4.5 and 4.6 also explain this evidence. The above discussed linear equation is based on the following mother equation that is used to find out the effect of one variable on other variables.

$$Y = a + BX$$

Where $Y = \text{Dependent variable}$

$a = \text{Intercept (constant)}$

$B = \text{Slope (increase or decrease coefficient of independent variable)}$

and $X = \text{Independent variable}$
Figure 4.5  Scatter Plots of Leadership Behaviour and Students’ Academic Achievement

Linear Regression with...  
R Sq Linear = 0.433
Figure 4.6 Scatter Plots of School Organizational Health and Students’ Academic Achievement

Dependent Variable: Students_Achievement_Score

Scatterplot
Research question 11

Is there any effect of subscales of principals’ Leadership Behavior like Model the way, Inspired the shared vision, Challenge the process, Enable others to act, and Encourage the heart on Students’ Academic Achievement?

As mentioned above leadership subscales are five so, to see effect of each subscale on students’ achievement separately this research question is further divided into sub research questions presented as under.

Research Question 11.1

Is there any effect of Leadership Behavior subscale Model the way of principals on Students’ Academic Achievement?

The null hypothesis for this research question is stated as bellow:

Ho: There is no significant effect of Leadership Behaviour subscale Model the Way on Students’ Academic Achievement.

In order to find out the effect of principals’ Leadership Behaviour subscale Model the Way on Students’ Academic Achievement, Simple Linear Regression was applied, and results obtained are presented in Tables 4.15 & 4.16.
Table 4.15

**Effect of Leadership Behaviour subscale Model the Way on Students’ Academic Achievement**

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.336</td>
<td>0.098</td>
<td>1</td>
<td>7.868</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Table 4.15 shows that the results of F-test support the predictive utilities of Model the Way, a subscale of Leadership Behaviour of secondary school principals on Students’ Academic Achievement, and R-square = 0.336, adjusted R-square = 0.098, and F = 7.868 is significant at p<0.01 with df = 1.

Table 4.16

**Regression Coefficients for effect of Leadership Behaviour subscale Model the Way on Students’ Academic Achievement**

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>620.48</td>
<td>55.78</td>
<td>11.12</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>MTW</td>
<td>37.82</td>
<td>13.48</td>
<td>.33</td>
<td>2.80</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Model the Way (MW)

Table 4.16 describes that the unstandardized coefficients for Leadership Behaviour subscale Model the Way (MW) β=37.82, and t=2.80 at p=0.000 is statistically significant. The null hypothesis claiming no significant effect of Model the Way on Students’ Academic Achievement is, therefore, rejected. For this research question, the prediction equation, using unstandardized coefficients, for Students’ Academic Achievement is given as under:
If the value of Model the Way is one, then the SA score becomes = 658.30. Whereas, mean score value for Model the Way is 4.05. Therefore, the Students’ Academic Achievement score in the result of effect of Model the Way on it, is calculated as under:

\[ \text{SA} = 773.651 \]

Hence, after the effect of leadership behaviour subscale Model the Way on Students’ Academic Achievement, the calculated value is 773.651. This is greater than the value 658.30 that was calculated before the effect. Thus, the difference of 115.35 shows that there is effect of leadership behaviour subscale Model the Way on Students’ Academic Achievement. The same is supported from the significance of the p value that is mentioned above in Table 4.16.

### Research Question 11.2

Is there any effect of leadership behavior subscale Inspired the Shared Vision of principals on Students’ Academic Achievement?

The null hypothesis for this research question is stated bellow:

**Ho** There is no significant effect of principals’ Leadership Behaviour subscale Inspired the Shared Vision on Students’ Academic Achievement.

In order to find out the effect of subscale Inspired the Shared Vision on Students’ Academic Achievement, Simple Linear Regression was applied, and results yielded are presented in the Tables 4.17 & 4.18.
Table 4.17

Effect of Leadership Behaviour subscale Inspired the Shared Vision on Students’ Achievement

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.276</td>
<td>0.061</td>
<td>1</td>
<td>5.123</td>
<td>0.027</td>
</tr>
</tbody>
</table>

Table 4.17 presents the results of the F-test that supports the predictive utilities of Inspired the Shared Vision, a subscale of Leadership Behaviour of secondary school principals’ effect on Students’ Academic Achievement. Whereas, R-square = 0.276, adjusted R-square = 0.061, F = 5.123 is not significant because p>0.01 with df = 1.

Table 4.18

Regression Coefficients of subscale Inspired the Shared Vision and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>687.33</td>
<td>39.86</td>
<td>17.24</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>ISPV</td>
<td>24.04</td>
<td>10.62</td>
<td>.27</td>
<td>2.26</td>
<td>.02</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Inspired the Shared Vision (ISV)

Table 4.18 presents the unstandardized coefficients for Students’ Academic Achievement, and Leadership Behaviour subscale Inspired the Shared Vision. Inspired the Shared Vision (ISV) β^=24.04, t=2.26, p>0.01 was found not statistically significant. Thus, the
null hypothesis claiming no significant effect of Inspired the Shared Vision on Students’
Academic Achievement is, therefore, accepted. The prediction equation, using unstandardized
coefficients, for Students’ Academic Achievement is as under:

$$SA = 687.33 + 24.04(ISV)$$

The value of SA before the effect of ISV is = 711.37. The mean score value for ISV is 3.59.
Therefore, in the result of effect of leadership behaviour subscale Inspired the Shared Vision on
Students’ Academic Achievement is calculated as under:

$$SA = 773.63$$

Hence, difference between the SA score before and after the effect of leadership behaviour
subscale Inspired the Shared Vision on Students’ Academic Achievement is 62.26. This is not
statistically significant because p>0.01 as mentioned above in Table 4.18. Therefore, leadership
behaviour subscale Inspired the Shared Vision have no effect on Students’ Academic
Achievement.
**Research Question 11.3**

Is there any effect of leadership behavior subscale Challenge the Process of principals on Students’ Academic Achievement?

The null hypothesis for this research question is given below:

**Ho** There is no significant effect of principals’ Leadership Behaviour subscale Challenge the Process on Students’ Academic Achievement.

In order to find out any effect of Challenge the Process on Students’ Academic Achievement, Simple Linear Regression was applied, and the results found are presented in the Tables 4.21 & 4.22.

Table 4.19

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.274</td>
<td>0.060</td>
<td>1</td>
<td>5.043</td>
<td>0.028</td>
</tr>
</tbody>
</table>

Table 4.19 shows the results of the *F-test* support to the predictive utilities of Challenge the Process, a subscale of Leadership Behaviour of secondary school principals on Students’ Academic Achievement. Where R-square = 0.274, adjusted R-square = 0.060, F = 5.043 is not significant because p>0.01 with df = 1.
Table 4.20

*Regression Coefficients of Leadership Behaviour subscale Challenge the Process and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>688.78</td>
<td>39.531</td>
<td>17.42</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>CHTP</td>
<td>23.64</td>
<td>10.53</td>
<td>.27</td>
<td>2.24</td>
<td>.03</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Challenge the Process (CHP)

Table 4.20 presents that the unstandardized coefficients for Students’ Academic Achievement and Challenge the Process, a subscale of Leadership Behaviour of secondary school principals. Challenge the Process (CHP) $\beta^*=23.64$, $t=2.24$, $p>0.01$ was not found statistically significant. The null hypothesis claiming no significant effect of Challenge the Process is, therefore, accepted. The prediction equation, using unstandardized coefficients, for Students’ Academic Achievement is as under:

$\text{SA} = 688.78 + 23.64(\text{CHTP})$

SA score before effect of Challenge the Process on Students’ Academic Achievement

is = 712.42

SA score after putting the value of mean score for leadership behaviour subscale Challenge the Process in above equation becomes as under:

$\text{SA} = 773.64$
The difference between the Students’ Academic Achievement score before and after the effect of Challenge the Process on it is 61.22. This effect is not statistically significant as mentioned in Table 4.20. Henceforth, from the equation it is shown that there was no remarkable effect of secondary school principals’ Leadership Behaviour subscale Challenge the Process on Students’ Academic Achievement.

**Research Question 11.4**

Is there any effect of leadership behavior subscale Enable Others to Act of principals on Students’ Academic Achievement?

The null hypothesis for this research question is stated as under:

**Ho** There is no significant effect of principals’ Leadership Behaviour subscale Enable Others to Act on Students’ Academic Achievement.

In order to find out the effect of Enable Others to Act on Students’ Academic Achievement, Simple Linear Regression was applied, and results found are presented in Tables 4.21 & 4.22.

Table 4.21

| Effect of Leadership Behaviour subscale Enable others to Act on Students’ Academic Achievement |
|---|---|---|---|---|
| R-Square | Adjusted R-Square | df | F | Sig. |
| 0.576 | 0.311 | 1 | 29.419 | 0.000 |
Table 4.21 shows the results of the F-test that supports the predictive utilities of Enable Others to Act, a subscale of Leadership Behaviour of secondary school principals on Students’ Academic Achievement. While R-square = 0.576, adjusted R-square = 0.311, F = 29.419 is significant at p=0.000 with df = 1.

Table 4.22

Regression Coefficients of Enable Others to Act and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>644.95</td>
<td>25.68</td>
<td>25.10</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>38.34</td>
<td>7.07</td>
<td>.56</td>
<td>5.42</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Enable others to Act (EA)

Table 4.22 presents the unstandardized coefficient of Enable Others to Act (EA) $\beta^*=38.34$, t=5.42, p = 0.000 that was found statistically significant. Thus, the null hypothesis claiming no significant effect of Enable Others to Act on the Students’ Academic Achievement is therefore, rejected.

The prediction equation of Enable Others to Act using unstandardized coefficient of Students’ Academic Achievement is as under:

$$SA = 644.95+38.34(EA)$$
SA score before putting the value of EA is = 683.29 and after putting EA mean score value in above equation it becomes as under:

\[ SA \ = \ 773.77 \]

The difference between SA score before and after the effect of leadership behaviour subscale Enables Others to Act is 128.82. Thus, prediction equation reflects that there was a significant effect of Enables Others to Act on Students’ Academic Achievement.

**Research Question 11.5**

Is there any effect of leadership behavior subscale Encourage the Heart of principals on Students’ Academic Achievement?

The null hypothesis for this research question is stated as under:

\[ Ho \quad \text{There is no significant effect of principals’ Leadership Behaviour subscale Encourage the Heart on Students’ Academic Achievement.} \]

In order to find out the effect of Encourage the Heart on Students’ Academic Achievement, Simple Linear Regression analysis was run, and the results found are presented in Tables 4.23 and 4.24.

**Table 4.23**

| Effect of Leadership Behaviour subscale Encourage the Heart on Students’ Academic Achievement |
|---------------------------------------------|-----------------|-----|-----|-----|
| R-Square | Adjusted R-Square | df  | F   | Sig. |
| 0.391    | 0.139             | 1   | 11.184 | 0.001 |
Table 4.23 shows that the results of the *F*-test support the predictive utilities of Encourage the Heart a subscale of Leadership Behaviour of secondary school principals on Students’ Academic Achievement. Whereas, R-square = 0.391, adjusted R-square = 0.139, F = 11.184 is significant at p<0.01 with df = 1.

Table 4.24

*Regression Coefficients of Encourage the Heart and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>583.52</td>
<td>57.92</td>
<td>10.07</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>EA</td>
<td>43.83</td>
<td>13.10</td>
<td>3.34</td>
<td>.00</td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Encourage the Heart (EH)

Table 4.24 presents the unstandardized coefficient of Encourage the Heart (EH) $\beta^\wedge =43.83, t=3.34, p = 0.000$ was found statistically significant. Thus, the null hypothesis claiming that there is no significant effect of Encourage the Heart on the Students’ Academic Achievement is therefore, rejected. The prediction equation of Encourage the Heart using unstandardized coefficient of Students’ Academic Achievement is given as under:

$$SA = 583.52 + 43.83(\text{Encourage the Heart})$$

SA score before the effect of EH is calculated = 588.35 whereas, after the effect of Leadership Behaviour of principals’ subscale Encourage the Heart on Students’ Academic Achievement has been calculated as under:
Hence, the difference in SA score before and after the effect of Encourage the Heart on Students’ Academic Achievement is 185.39. This shows a significant effect that is supported by p value as mentioned in Table 4.24.

**Research Question -12**

Is there any effect of leadership behavior of principals on Students’ Academic Achievement as described by themselves and as described by the teachers?

The null hypothesis for this research question is given bellow:

**Ho**  There is no significant effect of Leadership Behaviour of principals on Students’ Academic Achievement as described by themselves and by the teachers.

In order to find out the effect of Leadership Behaviour of principals on Students’ Academic Achievement as described by the principals themselves and by the teachers, Multiple Linear Regression was applied, and the results yielded are presented in the Tables 4.25& 4.26.

**Table 4.25**

*Effect of Leadership Behaviour of Principals according to Observers on students’ Academic Achievement*

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.461</td>
<td>0.444</td>
<td>2</td>
<td>26.10</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 4.25 describes that F-test supports the predictive utilities of Leadership Behaviour of secondary school principals self and as observed by teachers on Students’ Academic Achievement. Because $R^2 = 0.461$, adjusted $R^2 = 0.444$ and $F = 26.10$, which is significant at $p<0.01$ with $df = 2$.

Table 4.26

Regression Coefficients of Leadership Behaviour of Principals as described by them and according to Observers and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>$\beta$</th>
<th>$T$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>370.36</td>
<td>58.36</td>
<td></td>
<td>6.34</td>
<td>.00</td>
</tr>
<tr>
<td>LBP-O</td>
<td>13.22</td>
<td>7.45</td>
<td>.18</td>
<td>1.77</td>
<td>.08</td>
</tr>
<tr>
<td>LPI-S</td>
<td>80.83</td>
<td>13.57</td>
<td>.59</td>
<td>5.95</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Leadership Behavior of Principals as described by teachers (LBP-O)
c. Leadership Behaviour of Principals as described by themselves (LPI-S)

Table 4.26 presents the unstandardized coefficients for Students’ Academic Achievement and Leadership Behaviour of secondary school principals according to teachers. Leadership Behaviour as described by teachers (LBP-O) $\beta = 13.22$, $t=1.77$, $p>0.01$ was not found statistically significant. The null hypothesis claiming, no significant effect of Leadership Behaviour of principals on Students’ Academic Achievement as described by the teachers is, therefore, accepted.
Moreover, this table also presents the unstandardized coefficients for Students’ Academic Achievement and Leadership Behaviour of secondary school principals according to their own opinion. The effect of leadership Behaviour as described by themselves (LBP-S) \( \beta^*=80.83 \), \( t=5.95 \), \( p<0.01 \) was statistically significant. The null hypothesis claiming, no significant effect of Leadership Behaviour of principals on Students’ Academic Achievement as described by them is, therefore, rejected.

Effect of Leadership Behaviour Self and Observer can be calculated through the following prediction equation;

\[
Y = a + BX
\]

Where \( Y \) = Dependent variable
\( a \) = Intercept (constant)
\( B \) = Slope (increase or decrease coefficient of independent variable)
\( X \) = Independent variable

Therefore, \( SA= 370.36 +13.22 \times LBP-O \) + 80.83 (LPI-S)

Calculation for both LPI-O and LPI-S are made separately as under:

1- Effect of Leadership Behaviour on Students’ Academic Achievement according to teachers perceptions.

\[
SA = 370.36 + 13.22 \times LPI-O \text{ Mean Score} = 407.37
\]

Therefore, according to teachers, after the effect of Leadership Behaviour of Principals, the Students’ Academic Achievement score becomes = 407.37 on average. This score is statistically insignificant as shown in Table 4.26 that \( p>0.01 \).
2- Effect of Leadership Behaviour of principals Leadership Behaviour on Students’
Academic Achievement according to their own perceptions:

\[ \text{SA} = 370.36 + 80.83 \times \text{LPI-S Mean Score} = 736.51 \]

Therefore, according to the perceptions of secondary school principals after the effect of
their Leadership Behaviour, the Students’ Academic Achievement score becomes = 736.51 on
average. This score is statistically significant because \( p<0.01 \) as shown in Table 4.26.

**Research Question-13**

Is there any significant relationship between School Organizational Health and Students’
Academic Achievement?

The null hypothesis for this research question is given as under :

**Ho** There is no significant correlation between School Organizational Health and
Students’ Academic Achievement.

In order to find out correlation between School Organizational Health and Students’
Academic Achievement, Pearson Coefficient Correlation test was applied, and results obtained
are presented in Table 4.27.
Table 4.27

*Relationship between School Organizational Health and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>R</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Academic Achievement</td>
<td>1920</td>
<td>773.77</td>
<td>94.34</td>
<td>.83**</td>
<td>.00</td>
</tr>
<tr>
<td>School Organizational Health</td>
<td>1920</td>
<td>2.92</td>
<td>.33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<0.01

Table 4.27 depicts that Pearson r = 0.83 at p<0.01, Students’ Academic Achievement mean is 773.77 and SD is 94.34. For School Organizational Health, Mean value is 2.92 and SD is 0.33. Mean score is remarkably different for both of the variables and Pearson r-value is significant. Therefore, there is a significant correlation between School Organizational Health and Students’ Academic Achievement at secondary level. Thus, the null hypothesis claiming, no significant correlation between School Organizational Health and Students’ Academic Achievement is, therefore, rejected.
Research Question-14

Is there any relationship between School Organizational Health subscales: Institutional Integrity; Collegial Leadership; Resource Influence; Teacher Affiliation; and Academic Emphasis and Students’ Academic Achievement?

The null hypothesis for this research question is stated as under:

Ho There is no significant correlation between subscales; Institutional Integrity, Collegial Leadership, Resource Influence, Teacher Affiliation, and Academic Emphasis of School Organizational Health and Students’ Academic Achievement.

In order to find out correlation between School Organizational Health subscales (Institutional Integrity, Collegial Leadership, Resource Influence, Teacher Affiliation, and Academic Emphasis) and Students’ Academic Achievement, Pearson Coefficient Correlation test was applied, and results obtained are presented in Table 4.28.
Table 4.28

*Relationship between subscales of School Organizational Health and Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Achievement (SA)</td>
<td>1920</td>
<td>773.33</td>
<td>94.34</td>
<td>1</td>
</tr>
<tr>
<td>Institutional Integrity (II)</td>
<td>1920</td>
<td>2.57</td>
<td>.66</td>
<td>.24**</td>
</tr>
<tr>
<td>Collegial Leadership (CL)</td>
<td>1920</td>
<td>2.97</td>
<td>.53</td>
<td>.63**</td>
</tr>
<tr>
<td>Resource Influence (RI)</td>
<td>1920</td>
<td>2.90</td>
<td>.55</td>
<td>.56**</td>
</tr>
<tr>
<td>Teacher Affiliation (TA)</td>
<td>1920</td>
<td>3.09</td>
<td>.47</td>
<td>.69**</td>
</tr>
<tr>
<td>Academic Emphasis (AE)</td>
<td>1920</td>
<td>3.06</td>
<td>.46</td>
<td>.51**</td>
</tr>
</tbody>
</table>

**p<0.01

Table 4.28 shows the Pearson Coefficient Correlation between Institutional Integrity, a subscale of School Organizational Health and Students’ Academic Achievement at secondary level, which shows that there was a significant correlation between them, as r = 0.24 at significance p< 0.01, and (M = 2.57 & SD = 0.68 ). The null hypothesis claiming no significant correlation between SA and II, is therefore rejected. Moreover, according to Hinkle et al. (2003) interpretation table, there was a little positive correlation between School Organizational Health and Students’ Academic Achievement. But, according to Cohen (1988), Bartz (1999) and
Hopkins (1997) Pearson Coefficient Correlation value (r) below 0.1 is negligible even if it is significant.

This table also describes correlation between Collegial Leadership (CL) and Students’ Academic Achievement having Mean = 2.97, SD = 0.53, and r = 0.63 at p<0.01. Therefore, null hypothesis claiming no significant correlation between CL and SA is, therefore, rejected. According to Hinkle, et al. (2003) as mentioned earlier, Pearson’s interpretation table, a moderate positive correlation exists between Collegial Leadership and Students’ Academic Achievement.

It is evident from the analysis given in Table 4.28 that the Pearson Correlation Coefficient r-value for Resource Influence (RI) is 0.56 at significance p<0.01, and M = 2.90 with SD = 0.55. Therefore, according to aforementioned table of interpretation of Pearson Coefficient Correlation there was a positive moderate correlation between RI and Students’ Academic Achievement.

Furthermore, mean score for Teacher Affiliation is 3.09 and SD = 0.47. Whereas, value of r = 0.69 with p<0.01, which shows that there was a positive moderate correlation between Teachers Affiliation and Students’ Academic Achievement according to the Hinkle, et al. (2003) interpretation table. Therefore, the null hypothesis in this case is rejected.

Academic Emphasis (AE) was another factor of School Organizational Health having values (r = 0.51 at p<0.01) with mean score value = 3.06 and SD = 0.46, this r value shows that there was a positive moderate correlation between AE and SA. The null hypothesis claiming no significant correlation between AE and SA is, therefore, rejected.
Section – III  Effect of School Organizational Health on Students’ Academic Achievement.

In order to find out the effect of School Organizational Health on Students’ Academic Achievement, Regression analysis was conducted. It is pertinent to mention here that no significant evidence of violation of assumption of normality, linearity, and homoscedasticity has been observed. Analysis of residuals scatter plots provided a test of assumptions of normality, linearity, and homoscedasticity between predicted dependent variable scores and errors of prediction. Assumptions of regression analysis are that the residuals (differences between obtained and predicted dependent variable scores) are normally distributed about the predicted DV scores, that residuals have a straight line relationship with predicted DV scores, and that variance of the residuals about predicted DV scores is the same for all predicted scores. However, these assumptions are met; the residuals appear as in Figure 4.9. The histogram of the data displayed an approximate normal distribution. The same is presented in Figure 4.7, while the P-P plot shows a linear relationship (Figure 4.8) and the residual plot displayed no set patterns and, therefore, the assumption of homoscedasticity or homogeneity of variance of Leadership Behaviour and School Organizational Health were not violated. The assumption of homoscedasticity or homogeneity of variance is the assumption that the standard deviations of errors are approximately equal for all predicted dependent variable scores which is presented in Figure 4.9.
Figure 4.7  Histogram of Students’ Achievement Score (dependent variable) in terms of School Organizational Health.

![Histogram](image)

Figure 4.8  Normal Probability Plot of Regression Standardized Residual (SOH)

![Normal P-P Plot](image)
Figure 4.9 Scatter Plot of Regression Standardized Predicted Value

Scatterplot:

*Independent Variable:* School Organizational Health

*Dependent Variable:* Aggregate Students’ Academic Achievement Score

Scatterplot

Dependent Variable: Students_Achievement_Score
Research Question -15

Is there any effect of School Organizational Health on Students’ Academic Achievement?

**Ho** There is no significant effect of School Organizational Health on Students’ Academic Achievement.

In order to find out the effect of School Organizational Health (SOH) on Students’ Academic Achievement, Simple Linear Regression was applied, and results obtained are presented in Table 4.29 and 4.30.

Table 4.29

| Effect of School Organizational Health on Students’ Academic Achievement |
|-----------------|-----------------|----------|----------|----------|
| R-Square        | Adjusted R-Square | df       | F        | Sig.     |
| 0.835           | 0.696            | 1        | 4.403    | 0.000    |

Table 4.29 shows the results of F-test which supports the predictive utilities of School Organizational Health, Students’ Academic Achievement. Whereas, R-square = 0.835, adjusted R-square = 0.696, F = 4.403 that is significant at p=0.000 with df = 1.
Table 4.30

Regression Coefficients of School Organizational Health and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>502.85</td>
<td>18.57</td>
<td>-27.07</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>SOH</td>
<td>419.56</td>
<td>6.32</td>
<td>.83</td>
<td>66.35</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. School Organizational Health (SOH)

Table 4.30 depicts that unstandardized coefficient of School Organizational Health (SOH) $\beta^\wedge =419.56$, $t=66.35$, $p=0.000$ was found statistically significant. The null hypothesis claiming no significant effect of School Organizational Health on Students’ Academic Achievement, is therefore, rejected. The prediction equation of SOH using unstandardized coefficient of Students’ Academic Achievement is as under:

$$SA = -502.85 + 419.56(SOH)$$

The prediction equation reflects that there was a significant effect of SOH on Students’ Academic Achievement that can also be observed by the scattered plot linear regression line given below in Figure 4.10.
Figure 4.10 Scatter Plot for Regression on School Organizational Health & Students’ Academic Achievement.

Scatterplot

Dependent Variable: Students_Achievement_Score
Research question 15.1

Is there any effect of School Organizational Health subscales; Institutional Integrity; Collegial Leadership; Resource Influence; Teacher Affiliation; and Academic Emphasis on Students’ Academic Achievement?

Since School Organizational Health consists of five subscales; therefore, it is necessary to find out the effect of each factor on Students’ Academic Achievement. So, all five subscales will be addressed separately as sub questions of the research question 14.1 as given below:

Research Question 15.1.1

Is there any effect of School Organizational Health subscale Institutional Integrity on Students’ Academic Achievement?

The null hypothesis for this research question is as under:

\[ H_0 \] There is no significant effect of School Organizational Health subscale Institutional Integrity on Students’ Academic Achievement.

In order to find out the effect of Institutional Integrity on Students’ Academic Achievement, Simple Linear Regression test was applied, and the results obtained are presented in Tables 4.31 and 4.32.

Table 4.31

<table>
<thead>
<tr>
<th>Effect of Institutional Integrity on Students’ Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-Square</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>0.245</td>
</tr>
</tbody>
</table>
Table 4.31 shows the results of F-test which supports the predictive utilities of Institutional Integrity and Students’ Academic Achievement with the value of R-square = 0.245, adjusted R-square = 0.059, F = 122.295 which is significant at p=0.000 with df = 1.

Table 4.32

Regression Coefficients of Institutional Integrity and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>562.51</td>
<td>14.84</td>
<td>37.88</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>61.86</td>
<td>5.59</td>
<td>.24</td>
<td>11.05</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)
b. Institutional Integrity (II)

Table 4.32 presents the unstandardized coefficient of Institutional Integrity a subscale of School Organizational Health (II) \( \beta^\wedge =61.86, t= 11.05, \) and \( p = 0.000, \) that was found statistically significant. The null hypothesis claiming, no significant effect of Institutional Integrity on Students’ Academic Achievement, is therefore, rejected. The prediction equation of Institutional Integrity using unstandardized coefficient of Students’ Academic Achievement is given below:

\[ SA = 562.51+61.86(II) \]

SA score calculated before the effect of II is = 624.37. Whereas, the SA score after the effect of Institutional Integrity on Students’ Academic Achievement has been calculated as under:

\[ SA = 721.49 \]
The difference in SA score before and after the effect is 97.12, which shows that there is significant effect of Institutional Integrity on Students’ Academic Achievement. This is supported by the significance of p value mentioned in Table 4.32.

**Research Question 15.1.2**

Is there any effect of School Organizational Health subscale Collegial Leadership on Students’ Academic Achievement?

The null hypothesis for this research question is given below:

\[ Ho \] There is no significant effect of Collegial Leadership on Students’ Academic Achievement.

In order to find out the effect of Collegial Leadership on Students’ Academic Achievement, Simple Linear Regression analysis was run, and the results obtained are presented in Tables 4.33 and 4.34.

Table 4.33

*Effect of Collegial Leadership on Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>0.401</td>
<td>1</td>
<td>1.284</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 4.33 shows the results of F-test that supports the predictive utilities of Collegial Leadership and Students’ Academic Achievement. Whereas, R-square = 0.633, adjusted R-square = 0.401, F = 1.284 is significant at p=0.000 with df = 1.
Table 4.34

Regression Coefficients for Collegial Leadership and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>135.69</td>
<td>16.61</td>
<td>8.16</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td>197.16</td>
<td>5.50</td>
<td>0.63</td>
<td>35.83</td>
<td>0.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Collegial Leadership (CL)

Table 4.34 shows that unstandardized coefficient Collegial Leadership, a subscale of School Organizational Health (CL) $\beta = 197.16$, $t= 35.83$, $p = 0.000$ was found statistically significant. The null hypothesis, is therefore, rejected because there is significant effect of Collegial Leadership on Students’ Academic Achievement.

The prediction equation of Collegial Leadership using unstandardized coefficient of Students’ Academic Achievement is given below:

$$SA = 135.69 + 197.16(\text{CL})$$

SA score calculated before the effect of Collegial Leadership on Students’ Academic Achievement is 332.85. Whereas, this score calculated after the effect is as under:

$$SA = 721.25$$

The difference in SA score before and after the effect is 388.40. Thus, the prediction equation reflects that there was a significant effect of Collegial Leadership on Students’ Academic Achievement. The same has been supported by the p value mentioned in Table 4.34.
Research Question 15.1.3

Is there any effect of School Organizational Health subscale (Resource Influence) on Students’ Academic Achievement?

The null hypothesis for this research question is given below:

\[ H_0 \] There is no significant effect of Resource Influence on Students’ Academic Achievement.

In order to find out effect of Resource Influence on Students’ Academic Achievement, Simple Linear Regression test was applied, and the results obtained are presented in Tables 4.35 and 4.36 given below.

Table 4.35

<table>
<thead>
<tr>
<th>Effect of Resource Influence on Students’ Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-Square</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>0.568</td>
</tr>
</tbody>
</table>

Table 4.35 shows that the results of F-test which supports the predictive utilities of School Organizational Health subscale Resource Influence and Students’ Academic Achievement. Because value of R-square = 0.568, adjusted R-square = 0.322, and F = 911.383 that is significant at p=0.000 with df = 1.
Table 4.36

Regression Coefficients of Resource Influence and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>228.25</td>
<td>16.62</td>
<td>13.72</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>RI</td>
<td>170.09</td>
<td>5.63</td>
<td>.56</td>
<td>30.18</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Resource Influence (RI)

Table 4.36 shows that unstandardized coefficient of Resource Influence (RI) $\beta^\wedge = 170.09$, $t = 30.18$, $p = 0.000$ was found statistically significant. So, the null hypothesis claiming no significant effect of Resource Influence on Students’ Academic Achievement is, therefore, rejected. The prediction equation of Resource Influence using unstandardized coefficient of Students’ Academic Achievement is given below:

$$SA = 228.25 + 170.09(RI)$$

SA score before the effect of RI is 398.34 and the same score after the effect has been calculated as under:

$$SA = 721.51$$
The difference before and after the effect of Resource Influence on Students’ Academic Achievement is 493.26. Thus, the prediction equation reflects that there was a significant effect of Resource Influence on Students’ Academic Achievement. The same has been supported by significance of the p value that is mentioned in Table 4.36.

**Research Question 15.1.4**

Is there any effect of School Organizational Health subscale Teacher Affiliation on Students’ Academic Achievement?

The null hypothesis for this research question is stated as under:

$$H_0$$ There is no significant effect of Teacher Affiliation on Students’ Academic Achievement.

In order to find out the effect of Teacher Affiliation on Students’ Academic Achievement, Simple Linear Regression was applied, and the results found are presented in Tables 4.37 and 4.38 given below.

**Table 4.37**

*Effect of Teacher Affiliation on Students’ Academic Achievement*

<table>
<thead>
<tr>
<th>R-Square</th>
<th>Adjusted R-Square</th>
<th>df</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.693</td>
<td>0.479</td>
<td>1</td>
<td>1.768</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Table 4.37 shows the results of F-test which supports the predictive utilities of Teachers’ Affiliation and Students’ Academic Achievement. Whereas, R-square = 0.693, adjusted R-square = 0.479, and F = 1.768 is significant at p=0.000 with df =1.

Table 4.38

Regression Coefficients of Teacher Affiliation and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>-38.87</td>
<td>18.29</td>
<td>-2.12</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>TA</td>
<td>245.85</td>
<td>5.84</td>
<td>.69</td>
<td>42.05</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Teacher Affiliation (TA)

Table 4.38 presents that unstandardized coefficient of Teacher Affiliation (TA) \( \beta^\wedge = 245.85 \), \( t = 42.05, \) \( p = 0.000 \) was found statistically significant. Therefore, the null hypothesis is rejected. The prediction equation of Teacher Affiliation using unstandardized coefficient of Students’ Academic Achievement is given as under:

\[
SA = -38.87 + 245.85(TA)
\]

Before putting the mean score value for Teacher Affiliation the Students’ Academic Achievement is \( = 206.98 \). While, after putting the value of TA it has been calculated as under:

\[
SA = 721.30
\]

The difference in SA score before and after the effect of Teacher Affiliation on Students’ Academic Achievement is 514.32. Hence, the prediction equation reflects that there was a
significant effect of Teacher Affiliation on Students’ Academic Achievement. This has been supported by the significance of p value that is mentioned in Table 4.38.

**Research Question 15.1.5**

Is there any effect of School Organizational Health subscale Academic Emphasis on Students’ Academic Achievement?

The null hypothesis for this research question is stated as under:

$$H_0$$ There is no significant effect of Academic Emphasis on Students’ Academic Achievement.

In order to find out the effect of Academic Emphasis on Students’ Academic Achievement, Simple Linear Regression test was applied, and the results found are presented in Tables 4.39 and 4.40 given below.

Table 4.39

<table>
<thead>
<tr>
<th>Effect of Academic Emphasis on Students’ Academic Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R-Square</strong></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>0.517</td>
</tr>
</tbody>
</table>

Table 4.39 depicts that the results of F-test supports the predictive utilities of Academic Emphasis and Students’ Academic Achievement with R-square = 0.517, adjusted R-square = 0.267, and F = 700.744 is significant at p=0.000 with df = 1.
Table 4.40

Regression Coefficients of Academic Emphasis and Students’ Academic Achievement

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>155.36</td>
<td>21.63</td>
<td>7.18</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>AE</td>
<td>185.23</td>
<td>6.99</td>
<td>.51</td>
<td>26.47</td>
<td>.00</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Students’ Academic Achievement (SA)

b. Academic Emphasis (AE)

Table 4.40 states that unstandardized coefficient of Academic Emphasis (AE) $\beta^\wedge = 185.23$, $t = 26.47$, $p = 0.000$ was found statistically significant. Thus the null hypothesis claiming no significant effect of Academic Emphasis on Students’ Academic Achievement is, therefore, rejected. The prediction equation of Academic Emphasis using unstandardized coefficient of Students’ Academic Achievement is given below:

$$SA = 155.36 + 185.23(AE)$$

SA score before putting the value of AE in above equation is 340.59. The SA score after putting the value of AE in above equation has been calculated as under:

$$SA = 721.46$$

The difference before and after the effect of Academic Emphasis on Students’ Academic Achievement is 380.87. Thus, the prediction equation reflects that there was a significant effect
of Academic Emphasis on Students’ Academic Achievement. The same argument has been verified by the significance of p value that is mentioned in Table 4.40.

**Research Question-16**

Is there any difference in School Organizational Health on the basis of gender of the respondents?

The null hypothesis for this research question is stated as under:

*\( H_0 \)  There is no significant difference in School Organizational Health on the basis of gender of the respondents.

In order to find out difference between male and female students’ perceptions about School Organizational Health of their relevant schools, \( t \) statistics was conducted, and the results obtained are presented in Table 4.41 given below:

**Table 4.41**

*Difference in School Organizational Health on the basis of Gender of the students*

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>( df )</th>
<th>( t )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>995</td>
<td>2.89</td>
<td>.30</td>
<td>1918</td>
<td>-4.37</td>
<td>.00**</td>
</tr>
<tr>
<td>Female</td>
<td>925</td>
<td>2.95</td>
<td>.35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Table 4.41 reflects \( t \)-value (-4.37) at significance \( p<0.01 \) with \( df = 1918 \) and mean score for male students = 2.89, and for female students it is 2.95. Similarly, standard deviation for male students is 0.30, and for female students it is 0.35. The number of male students who took
part in the study was 995 and female students were 925. Hence there was a significant difference in School Organizational Health according to the opinion of the male and female students. The null hypothesis claiming, no significant difference between male and female students’ opinion about School Organizational Health is, therefore, rejected.

**Research Question-17**

Is there any difference in public and private schools’ Organizational Health?

The null hypothesis for this research question is stated as under:

\[ H_0 \text{ There is no significant difference in public and private schools Organizational Health} \]

In order to find out difference between public and private Schools’ Organizational Health, t test was applied, and results yielded through this analysis are presented in Table 4.42 given below:

**Table 4.42**

*Difference in School Organizational Health on the basis of Public and Private Schools*

<table>
<thead>
<tr>
<th>Type of Schools</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>960</td>
<td>2.93</td>
<td>.33</td>
<td>1918</td>
<td>.96</td>
<td>.33</td>
</tr>
<tr>
<td>Private</td>
<td>960</td>
<td>2.91</td>
<td>.32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.42 shows that \( t = 0.96 \) at \( p > 0.01 \) with \( df = 1918 \) while mean score for public schools was 2.93 and for private schools was 2.9. Similarly standard deviation for public schools was 0.33 and for private schools was 0.32. The number of public and private schools was same,
which was 960. There was no significant difference in School Organizational Health of public and private secondary schools as t-value is not significant at \( p = 0.33 \). Therefore, the null hypothesis is accepted. Hence, public and private secondary schools observe the similar conditions of School Organizational Health.

**Research Question-18**

Is there any difference in School Organizational Health according to the opinion of the Science and Arts students?

The null hypothesis for this research question is stated as under:

\[ H_0 \text{ There is no significant difference in School Organizational Health of secondary schools according to the opinion of Science and Arts students.} \]

In order to find out the difference between science and arts group students’ opinion about their Schools’ Organizational Health, t test was applied, and the results found after this analysis are presented in Table 4.43 given below:

| Table 4.43 |
|---|---|---|---|---|---|---|
| Discipline of Students | N | M | SD | df | t | p  |
| Science | 1005 | 2.95 | .31 | 1918 | -5.07 | .00** |
| Arts | 915 | 2.88 | .34 | |

**p<0.01**
Table 4.43 shows that the number of science students was 1005 and arts students were 915 who participated in the survey of the study regarding School Organizational Health. Mean score for science students was 2.95 and for arts students it was 2.88. Accordingly, the standard deviation for science students was 0.31 and for arts students it was 0.34. Whereas, t-value was -.5.07 which is significant at p<0.01 with df = 1918. This shows that School Organizational Health was significantly different for Science and Arts group secondary school students.

Thus, the null hypothesis claiming no significant difference between Science and Arts group students’ opinion about their Schools Organizational Health is, therefore, rejected.
4.2 Summary of Results

Results show that there is significant correlation between Leadership Behaviour of principals and Students’ Academic Achievement according to their own perceptions. But according to the perceptions of teachers there is no significant correlation between Leadership Behaviour of principals and Students’ Academic Achievement. Accordingly, a significant correlation exists between School Organizational Health and Students’ Academic Achievement. There is significant correlation between Leadership Behaviour of principals and School Organizational Health.

No significant difference in Leadership Behaviour of principals has been found on the basis of gender and type of schools according to the opinion of principals themselves and teachers. Whereas, there is significant different in the opinion of principals and teachers about the leadership behaviour of principals.

There is no significant effect of overall Leadership Behaviour of principals on Students’ Academic Achievement. According to the perceptions of principals there is effect of their leadership behaviour on Students’ Academic Achievement. According to their perceptions the average achievement score of students is 736.51 as a result of their influence on students. Whereas, according to the perceptions of the teachers, average achievement score of the students is 407.37 in the result of their principals’ leadership behaviour. Moreover, only three out of five subscales of leadership behaviour have some effect on Students’ Academic Achievement.

Furthermore, effect of School Organizational Health on Students’ Academic Achievement has been found statistically significant along with its five subscales. A significant difference in School Organizational Health has been found according to the opinion of male and female students. Moreover, a significant difference in School Organizational Health has been
found according to the opinion of the science and arts students. School Organizational Health of public schools is not significantly different from private schools according to the opinion of public and private school students.
CHAPTER V

Summary, Findings, Conclusions, Discussion & Recommendations

5.1 Summary

The major aim of the study was to investigate the effect of Leadership Behaviour of secondary school principals and School Organizational Health on Students’ Academic Achievement. This study also explored the effect of different subscales of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement. Effect of Leadership Behaviour of principals on Students’ Academic Achievement as perceived by teachers was also explored in the study at hand. Sixty four secondary school principals and one hundred twenty eight secondary school teachers were selected as the sample of the study. These respondents were male as well as female principals and teachers from public and private sector secondary schools of Punjab province. Moreover, one thousand nine hundred and twenty students were selected as a sample of the study. These were male and female, arts and science group students. These students were from the same public and private secondary schools of Punjab province from where principals and teachers were selected.

Leadership Behaviour of secondary school principals was measured by Leadership Practices Inventory Self (LPI-Self) as perceived by themselves. Leadership Practices Inventory Observers (LPI-Observer) was used to measure the Leadership Behaviour of principals as perceived by the teachers of the same schools. This instrument consisted of 30 statements at six point Likert scale. Leadership Practices Inventory consists of five subscales. Accordingly, School Organizational Health was measured through another instrument known as Organizational Health Inventory for Education (OHI-E). OHI-E consisted of 37 statements at four point Likert scale. This research tool has five subscales and was served on students. The
achievement scores of students were collected from the result Gazette for secondary schools annual examination 2013 of the Boards of Intermediate and Secondary Education Punjab. Relationships between Leadership Behaviour and its subscales as well as School Organizational Health and its subscales with Students’ Academic Achievement were explored. Furthermore, relationship between Leadership Behaviour as perceived by teachers and Students’ Academic Achievement was also explored. The difference between Leadership Behaviour as perceived by leaders themselves and as perceived by teachers was also discovered. Computations were made using SPSS-16 software package. Descriptive statistics as mean score (M) and standard deviation (SD), t test, Pearson Coefficient Correlation and Simple Linear Regression Analysis were used to analyze and interpret the data.

Results show that there is significant correlation between Leadership Behaviour of principals and Students’ Academic Achievement according to their own perceptions. But according to the perceptions of teachers there is no significant correlation between Leadership Behaviour of principals and Students’ Academic Achievement. Accordingly, a significant correlation exists between School Organizational Health and Students’ Academic Achievement. There is significant correlation between Leadership Behaviour of principals and School Organizational Health.

No significant difference in Leadership Behaviour of principals has been found on the basis of gender and type of schools according to the opinion of principals themselves and teachers. There is significant difference in the opinion of principals and teachers about the leadership behaviour of principals. There is no significant effect of overall Leadership Behaviour of principals on Students’ Academic Achievement. According to the perceptions of principals there is effect of their leadership behaviour on Students’ Academic Achievement.
According to their perceptions the average achievement score of students is 736.51 as a result of their influence on students. Whereas, according to the perceptions of the teachers, average achievement score of the students is 407.37 in the result of their principals’ leadership behaviour. Moreover, only three out of five subscales of leadership behaviour have some effect on Students’ Academic Achievement.

Furthermore, effect of School Organizational Health on Students’ Academic Achievement has been found statistically significant along with its five subscales. A significant difference in School Organizational Health has been found according to the opinion of male and female students. Moreover, a significant difference in School Organizational Health has been found according to the opinion of the science and arts students. School Organizational Health of public schools is not significantly different from private schools according to the opinion of public and private school students.
5.2 Findings

On the basis of data analysis, all the findings were combined regarding descriptive information about subjects of the study. Moreover, conclusions in the results of inferential statistical analysis like Pearson Coefficient Correlation, t test, Regressions Analysis for effect of Leadership Behaviour and School Organizational Health towards Students’ Academic Achievement have been presented here. Findings are further divided into three sections. Section one includes Descriptive Statistics, Pearson Coefficient Correlation for Leadership Behaviour of principals with Students’ Academic Achievement as perceived by themselves and as perceived by teachers. Also, the findings based on t test for Comparison of Leadership Behaviour of principals on the basis of gender and type of schools is presented here.

Section two is further divided into two subsections that is section 2-a, & section 2-b in order to present findings. In section 2-a, effect of Leadership Behaviour of secondary school principals on Students’ Academic Achievement according to themselves and according to teachers has been presented. Moreover, difference between both of their perceptions is also presented in this section.

In section three relationship of School Organizational Health along with its five subscales with Students’ Academic Achievement have been presented. Furthermore, effect of School Organizational Health along with its five subscales on Students’ Academic Achievement has been presented. Difference between the perceptions of male and female students about the secondary schools’ organizational health is presented here in this section. Moreover, a comparison on the basis of type of school and nature of groups of students is presented in this section.
Section One

5.2.1 Descriptive Statistics, Pearson Coefficient Correlation and t test for Comparison of Leadership Behaviour

This section consists of the findings on the basis of simple descriptive statistics like mean score, standard deviation, percentages for different variables. Strength of correlation between variables is concluded on the basis of Pearson Coefficient Correlation r values. t values have been used for comparison among the variables and are presented as below:

1. The results show that mean scores for male and female principals were equal that is 1.58, and for male and female teachers mean score is 1.67. Mean score is same for public and private school principals and teachers. Mean achievement score of students in 10th grade examination was 773.77 and SD was 94.34. Mean score for Leadership Behaviour of principals as perceived by themselves was 4.53. Mean score for Leadership Behaviour as perceived by teachers was 2.80. Highest mean score for the scale used to measure the Leadership Behaviour was 6. Mean score value measured for School Organizational Health was 2.92. The highest mean score value for the scale used to measure School Organizational Health was 4.

2. Pearson Coefficient Correlation value (r = 0.65) was significant at p<0.01 between Leadership Behaviour of principals as perceived by themselves and Students’ Academic Achievement.

3. Pearson Coefficient Correlation value (r = 0.25) was significant at p<0.05 for correlation between Leadership Behaviour of principals as perceived by teachers and Students’ Academic Achievement.
4. The results show that Pearson Coefficient Correlation value \( r = 0.33 \) for Model the Way and Students’ Academic Achievement was significant at \( p<0.01 \). Whereas, Pearson Coefficient Correlation value \( r = 0.27 \) for relationship between Inspired the Shared Vision and Students’ Academic Achievement was significant at \( p<0.05 \). Pearson Coefficient Correlation value \( r = 0.27 \) was similar for relationship between Challenge the Process and Students’ Academic Achievement, and was also significant at \( p<0.05 \). Moreover, Pearson Coefficient Correlation value \( r = 0.56 \) for relationship between Encourage to Act and Students’ Academic Achievement was significant at \( p<0.01 \). Pearson Coefficient Correlation value \( r = 0.39 \) for relationship between Encourage the Heart and Students’ Academic Achievement significant at \( p<0.05 \).

5. Pearson Coefficient Correlation between Leadership Behaviour of secondary school principals and Students’ Academic Achievement was \( r = 0.66 \), and was significant at \( p<0.01 \). Accordingly, Pearson Coefficient Correlation between School Organizational Health and Students’ Academic Achievement was \( r = 0.91 \), and was significant at \( p<0.01 \). Moreover, Pearson Coefficient Correlation between Leadership Behaviour of secondary school principals and School Organizational Health was \( r = 0.62 \), and was significant at \( p<0.01 \).

6. Results show that \( t = -0.82 \) and \( p > 0.01 \) with \( df = 62 \). Male and female principals behave similarly. For male principals mean score value was 4.4 and SD = 0.60. For female principals mean score value was 4.5 and SD = 0.76.

7. Results reflect that \( t= 0.85 \) and \( p>0.01 \) with \( df = 62 \). For public school principals mean score was 4.6 and SD = 0.76. For private school principals mean score was 4.4 and SD = 0.62.
8. Mean score for Leadership Behaviour as perceived by principals themselves was 4.53 and SD = 0.69. Mean score for Leadership Behaviour of principals as perceived by teachers was 2.90 and SD = 1.22. Moreover, t-value = 11.37 and p<0.01 with df = 63.

9. For comparison of male and female principals Leadership Behaviour of principals as perceived by the teachers, t-value = -1.57 and p<0.01 with df = 62. Whereas, for male teachers mean score was 4.34 and SD = 0.64. For female teachers mean score was 4.63 and SD = 0.70.

10. Results show that t-value = 0.85 and p>0.01 with df = 62. For Leadership Behaviour of public school principals mean score was 4.61 and SD = 0.76. Similarly, for Leadership Behaviour of private school principals mean score was 4.46 and SD = 0.62.
Section Two

5.2.2 Effect of Leadership Behaviour of principals and it’s subscales on Students’ Academic Achievement.

In this section effect of leadership behaviour on Students’ Academic Achievement has been presented. This section has been further subdivided in to two parts.

Part –A

This part presents the results of effect of Leadership Behaviour as perceived by the principals themselves and subscales (Model the Way, Inspired the Shared Vision, Challenge the Process, Enable others to Act and Encourage the Heart) on Students’ Academic Achievement.

1- Results for effect of Leadership Behaviour of principals as perceived by themselves and School Organizational Health on Students’ Academic Achievement show that R-square = 0.844, adjusted R-square = 0.839, F = 164.88 that is significant at p<0.01 with df = 2.

Furthermore, beta value for Leadership Behaviour of principals as perceived by them (LBP-S) is $\beta^1=20.83$, t=2.38 at p>0.01 was not found statistically significant. The Students’ Academic Achievement score calculated in the result of effect of Leadership Behaviour of principals as perceived by themselves on it is given below:

SA= 554.97

This result shows that there is no significant effect of Leadership Behaviour of principals as perceived by themselves on Students’ Academic Achievement because p-value is not significant.
Moreover, beta value for School Organizational Health (SOH) is $\beta^*=79.21$, $t=12.66$ that is significant at $p=0.000$. The Students’ Academic Achievement score calculated in the result of effect of School Organizational Health on it is given below:

$$SA= 691.91$$

This SA score is in the result of significant effect of School Organizational Health on Students’ Academic Achievement as the p-value is significant.

2. Results for effect of Model the Way on Students’ Academic Achievement show that R-square = 0.336, adjusted R-square = 0.098, $F = 7.868$ and is significant at $p<0.01$ with $df = 1$. Beta value for Model the Way (MTW) is $\beta^*=37.82$, $t=2.80$, $p=0.000$.

Students’ Academic Achievement score in the result of effect of Model the Way on it is calculated through equation given below:

$$SA= 773.651$$

Thus, Students’ Achievement score 773.651 obtained in the result of effect of Model the Way on Students’ Academic Achievement is significant, because p-value is significant.

3. Results for effect of Inspired the Shared Vision on Students’ Academic Achievement show R-square = 0.276, adjusted R-square = 0.061, $F = 5.123$ is not significant because $p>0.01$ with $df = 1$. Beta value for Inspired the Shared Vision (ISPV) is $\beta^*=24.04$, $t=2.26$, $p>0.01$. Students’ Academic Achievement score calculated through equation below in the result of effect of Inspired the Shared Vision on it is as under:

$$SA= 773.63$$
Thus, Students’ Achievement score 773.63 obtained in the result of effect of Inspired the Shared Vision on Students’ Academic Achievement is not significant, because p-value is not significant.

4. Results for effect of Challenge the Process on Students’ Academic Achievement show that $R^{2} = 0.274$, adjusted $R^{2} = 0.060$, $F = 5.043$ is not significant because $p>0.01$ with $df = 1$. Beta value for Challenge the Process (CHP) is $\beta^\wedge = 23.64$, $t=2.24$, $p>0.01$. Students’ Academic Achievement score calculated through equation below in the result of effect of Challenge the Process on it is as under:

$$SA = 773.64$$

Thus, Students’ Achievement score 773.64 obtained in the result of effect of Challenge the Process on Students’ Academic Achievement is not significant, because p-value is not significant.

5. Results for effect of Enable Others to Act on Students’ Academic Achievement show that $R^{2} = 0.576$, adjusted $R^{2} = 0.311$, $F = 29.419$ is significant at $p=0.000$ with $df = 1$. Beta value for Enable Others to Act (EOA) is $\beta^\wedge = 38.34$, $t=5.42$, $p = 0.000$.

Students’ Academic Achievement score in the result of effect of Enable Others to Act on it is calculated through the equation given below;

$$SA = 773.77$$

Thus, Students’ Academic Achievement score 773.77 obtained in the result of effect of Enable Others to Act is significant because p-value is significant.

6. Results for effect of Encourage the Heart on Students’ Academic Achievement shows that $R^{2} = 0.391$, adjusted $R^{2} = 0.139$, $F = 11.184$ is significant at
p<0.01 with df = 1. Beta value for Encourage the Heart (EH) $\beta^* = 43.83$, $t=3.34$, $p = 0.000$. Students’ Academic Achievement score in the result of Encourage the Heart on it is calculated by the equation given below:

$SA = 773.74$

Thus, Students’ Academic Achievement score 773.74 obtained in the result of effect of Encourage the Heart is significant because p-value is significant.

Part – B

This part presents the results of effect of Leadership Behaviour of principals as perceived by the principals themselves and as perceived by the teachers on Students’ Academic Achievement. Moreover, a difference in achievement score of the students in the result of above mentioned effect is presented here.

1. Results for effect of Leadership Behaviour of principals on Students’ Academic Achievement as perceived by themselves shows that R-square = 0.461, adjusted R-square = 0.444, $F = 26.10$ that is significant at $p = 0.000$ with df = 2. Beta value for Leadership Behaviour of principals as perceived by themselves (LBP-S) is $\beta^* = 80.83$, $t=5.95$, $p < 0.01$.

Students’ Academic Achievement score in the result of effect of Leadership Behaviour Self is calculated by the equation given below:

$SA = 736.51$

Thus, according to the perceptions of principals effect of their leadership behaviour on students’ academic achievement is significant because p-value is significant.
2. Furthermore, results show that beta value for Leadership Behaviour of principals as perceived by teachers (LBP-O) is $\beta^* = 13.22$, $t = 1.77$, $p > 0.01$.

Students’ Academic Achievement score in the result of effect of Leadership Behaviour of principals as perceived by teachers on it is calculated through the equation given below:

$$SA = 407.37$$

Thus, obtained Students’ Achievement Score in the result of effect of Leaders Behaviour of principals as perceived by teachers is 407.37 and that is not significant because p-value is not significant.
Section Three

5.2.3 Effect of School Organizational Health on Students’ Academic Achievement.

In this section correlation of School Organizational Health along with its five subscales with Students’ Academic Achievement has been presented. Moreover, effect of School Organizational Health along with its five subscales on Students’ Academic Achievement has been presented. In-addition a comparison of School Organizational Health on the basis of gender of students and nature of their groups like science and arts is presented here in this section. For this purpose this section is further subdivided in three parts.

Part –A

This part presents correlation between School Organizational Health and its subscales (Institutional Integrity, Collegial Leadership, Resource Influence, Teacher Affiliation, Academic Emphasis) and Students’ Academic Achievement.

1. Results show that Pearson Coefficient Correlation of School Organizational Health and Students’ Academic Achievement is $r = 0.83$ is significant at $p<0.01$. Students’ Academic Achievement mean score is 773.77 and SD = 94.34, and for School Organizational Health mean score is 2.92 and SD = 0.33.

2. Results show that Pearson Coefficient Correlation of School Organizational Health subscale Institutional Integrity with Students’ Academic Achievement is $r = 0.24$ and is significant at $p< 0.01$. Institutional Integrity mean score is 2.57 and SD = 0.68.
results also show that Pearson Coefficient Correlation of another subscale of School Organizational Health Collegial Leadership and Students’ Academic Achievement is $r = 0.63$ and is significant at $p<0.01$. Mean score for Collegial Leadership is 2.97 and SD = 0.53.

Also, Pearson Coefficient Correlation value for Resource Influence and Students’ Academic Achievement is $r = 0.56$ and is significant at $p<0.01$. Mean score value for Resource Influence is 2.90 and SD = 0.55.

Furthermore, Pearson Coefficient Correlation value for Teacher Affiliation and Students’ Academic Achievement is $r = 0.69$ and is significant at $p<0.01$. Mean score value for Teacher Affiliation is 3.09 and SD = 0.47.

Pearson Coefficient Correlation for Academic Emphasis and Students’ Academic Achievement is $r = 0.51$ and is significant at $p<0.01$. Mean score value for Academic Emphasis is 3.06 and SD = 0.46.

**Part –B**

In this part results for effect of School Organizational Health and its subscales (Institutional Integrity, Collegial Leadership, Resource Influence, Teacher Affiliation, Academic Emphasis) on Students’ Academic Achievement are presented.

3. Results for effect of School Organizational Health on Students’ Academic Achievement show that $R$-square = 0.835, adjusted $R$-square = 0.696, $F = 4.403$ is significant at $p=0.000$ with $df = 1$. Beta value for School Organizational Health (SOH) is $\beta^\wedge = 419.56$, $t= 66.35$, $p = 0.000$. From given below equation for effect of School Organizational Health on Students’ Academic Achievement, the score can be calculated as under:

$$SA = 723.11$$
Students’ Academic Achievement score 723.11 is significant in the result of the effect of School Organizational Health on it because p-value is significant.

4. Results for effect of Institutional Integration on Students’ Academic Achievement show that R-square = 0.245, adjusted R-square = 0.059, F = 122.295 is significant at p=0.000 with df = 1. Beta value for Institutional Integration (II) is $\beta^* = 61.86$, $t = 11.05$, $p = 0.000$. Students’ Academic Achievement is calculated by the equation given below:

$$SA = 721.49$$

Thus, the score 721.49 obtained in the result of effect of Institutional Integration on Students’ Academic Achievement is significant because p-value is significant here.

5. Results for effect of Collegial Leadership on Students’ Academic Achievement show that R-square = 0.633, adjusted R-square = 0.401, F = 1.284 is significant at p=0.000 df = 1. Beta value for Collegial Leadership (CL) is $\beta^* = 197.16$, $t = 35.83$, $p = 0.000$. Students’ Academic Achievement score in the result of effect of Collegial Leadership on it is calculated by the equation given below:

$$SA = 721.25$$

The score obtained this way is significant because p-value is significant here.

6. Results for effect of Resource Influence on Students’ Academic Achievement show that R-square = 0.568, adjusted R-square = 0.322, F = 911.383 is significant at p=0.000 with df =1. Beta value for Resource Influence (RI) is $\beta^* = 170.09$, $t = 30.18$, $p = 0.000$. Students’ Academic Achievement score in the result of effect of Resource Influence on it is calculated by the equation given below:

$$SA = 721.51$$

The score obtained this way is significant because p-value is significant here.
7. Results for effect of Teacher Affiliation on Students’ Academic Achievement show that
R-square = 0.693, adjusted R-square = 0.479, F = 1.768 is significant at p=0.000 with df
= 1. Beta value for Teacher Affiliation (TA) is $\beta^\wedge = 245.85$, t = 42.05, p = 0.000.
Students’ Academic Achievement score in the result of effect of Teacher Affiliation on it
is calculated by the equation given below:

$$SA = 721.30$$

The score obtained this way is significant because p-value is significant here.

8. Results for effect of Academic Emphasis on Students’ Academic Achievement show that
R-square = 0.517, adjusted R-square = 0.267, F =700.744 is significant at p=0.000 with
df = 1. Beta value for Academic Emphasis (AE) is $\beta^\wedge = 185.23$, t = 26.47, p = 0.000.
Students’ Academic Achievement score in the result of effect of Academic Emphasis on
it is calculated by the equation given below:

$$SA = 721.46$$

The score obtained this way is significant because p-value is significant here.

9. Results show that t-value = -4.37 is significant at p<0.01 with df = 1918. Male students
mean score for School Organizational Health is 2.89 and SD = 0.30. Female students
mean score for School Organizational Health is 2.95 and SD = 0.35.

10. For difference in School Organizational Health of public and private secondary schools
t= .96, that is not significant at p>0.01, with df =1918. Whereas, mean score of public
schools is 2.93 and SD = 0.33, and mean score for private schools is 2.91 with SD= 0.32.

11. Results show that number of science group students was 1005 and arts group students
were 915 and mean score for arts group School Organizational Health is 2.95 and SD =
0.31 and mean score for arts group students is 2.88 and SD = 0.34. Whereas, t-value = -5.07 that is significant at p<0.01 with df = 1918.
5.3 Conclusions

On the basis of the findings presented earlier following conclusions were drawn;

1. The number of male and female principals was not equal because five female principals were found supervising boy schools instead of male principals while the number of boys and girls school was equal. Accordingly, number of female teachers was also greater than male teachers and ratio of female students was less due to the enrolment of male students in some of the female schools. Pertinent to mention here is that domination of female participants is only in private schools.

2. Mean score of Leadership Behaviour of secondary school principals as perceived by themselves was greater than the mean score of Leadership Behaviour of secondary school principals as perceived by the teachers. Therefore, it was concluded that there was difference in Leadership Behaviour of principals as perceived by themselves and as perceived by the teachers of the same school. Mean score value of School Organizational Health is greater than half of the mean score value of the measuring scale. Thus, it can be concluded that a strong correlation exists between School Organizational Health and the Students’ Academic Achievement.

3. A moderate and positive correlation was found between Leadership Behaviour of secondary school principals as perceived by themselves and Students’ Academic Achievement of the 10th grade students as the value of Pearson Coefficient Correlation was found to be significant.

4. It was concluded that there was a very small correlation between Leadership Behaviour of secondary school principals and Students’ Academic Achievement according to the perceptions of the teachers.
5. There was a very small correlation between Model the Way, Inspired the Shared Vision and Challenge the Process subscales of Leadership Behaviour and Students’ Academic Achievement. However, there was a moderate positive correlation between Encourage to Act and Students’ Academic Achievement. Moreover, there was a low positive correlation between Encourage the Heart and Students’ Academic Achievement. Therefore, it is concluded that only Encouraging for action to the students subscale of Leadership Behaviour of secondary school principals, shows a positive and strong correlation with Students’ Academic Achievement.

6. There was a strong positive correlation between Leadership Behaviour of secondary school principals and Students’ Academic Achievement. However, there was a very high and positive correlation between School Organizational Health and Students’ Academic Achievement. Furthermore, a moderate positive correlation was found between Leadership Behaviour of secondary school principals and School Organizational Health.

7. No significant difference was found between male and female principals Leadership Behaviour. Also, no significant difference was found between Leadership Behaviour of private and public secondary school principals.

8. There was a significant difference between Leadership Behaviour principals as perceived by themselves and as perceived by the teachers.

9. No difference in the Leadership Behaviour of male and female principals was found as perceived by the principals themselves and as perceived by the teachers. Moreover, it was found that there was no difference between Leadership Behaviour of private and public school principals.
10. It has been concluded from the Regressions’ relationship results that there was a strong correlation between Leadership Behaviour, School Organizational Health and Students’ Academic Achievement. However, effect of Leadership Behaviour on Students’ Academic Achievement has been found much less as compared to School Organizational Health.

11. Results showed that F was not significant, therefore, it has been concluded that a very little relationship exists between Leadership Behaviour of principals as perceived by teachers and Students’ Academic Achievement at secondary level. Accordingly, regression results showed that beta value was very poor and t-value was not found significant. Therefore, from prediction equation it was discovered that there was no significant effect of secondary school principals’ Leadership Behaviour on Students’ Academic Achievement according to perceptions of the teachers.

12. It was concluded from results that there was a significant effect of Model the Way on Students’ Academic Achievement because beta value was found significant. There was a significant effect of secondary school principals’ Leadership Behaviour subscale Model the Way on Students’ Academic Achievement. Whereas, Inspired the Shared Vision had no effect on Students’ Academic Achievement because its beta value was found statistically insignificant. Similarly, for Challenge the Process, F and t values were not found significant. Therefore, Challenge the Process had no effect on Students’ Academic Achievement. Accordingly, for Challenge the Process beta value was found not significant, therefore, it has no effect on Students’ Academic Achievement. Whereas, Enable Others to Act had a significant effect on Students’ Academic Achievement as F-
value was significant as well as for Enable Others to Act beta value was found statistically significant. Therefore, prediction equation also represented that there was a significant effect of Encourage to Act on Students’ Academic Achievement at secondary level. As for as 5th subscale of Leadership Behaviour is concerned, results revealed that beta value for Encourage the Heart was found statistically significant to Students’ Academic Achievement. The same was also confirmed by prediction equation of regression results.

13. From results it was concluded that a strong positive correlation was found between School Organizational Health and Students’ Academic Achievement.

14. From results it has been concluded that a significant correlation between Institutional Integrity the 1st subscale of School Organizational Health and Students’ Academic Achievement exists. Collegial Leadership has a moderate positive correlation with Students’ Academic Achievement. Resource Influence, the 3rd subscale of School Organizational Health has a significant correlation with Students’ Academic Achievement. There was a positive moderate correlation between Teachers Affiliation i.e. 4th factor of School Organizational Health and Students’ Academic Achievement. Academic Emphasis is 5th subscale of School Organizational Health which has a positive moderate correlation with Students’ Academic Achievement.

15. It has been concluded from results that there was a significant effect of School Organizational Health on Students’ Academic Achievement because F and t values were found significant. Moreover, unstandardized coefficient of School Organizational Health was found statistically significant.
16. From results it was depicted that unstandardized coefficient beta value for Institutional Integrity was found statistically significant. F-value was also found significant and prediction equation reflected its significant effect on Students’ Academic Achievement. Collegial Leadership had a significant effect on Students’ Academic Achievement because t & F values were significant. Resource Influence, the 3rd subscale of School Organizational Health had also a significant effect on Students’ Academic Achievement because beta value was significant. Teacher Affiliation was observed to have a strong effect on Students’ Academic Achievement because F & t values were found to be significant. Academic Emphasis 5th subscale of School Organizational Health also showed a significant effect on Students’ Academic Achievement as beta value was found significant.

17. It has been concluded from the results that there was a significant difference in School Organizational Health as perceived by the male and female students. It was found that t-value was significant. Therefore, it has been concluded that male students ranked School Organizational Health different from female students.

18. It is evident from the findings that there was no significant difference between School Organizational Health of public and private secondary schools according to the perceptions of students’ because value of t was not significant. Therefore, it has been concluded that public and private secondary schools provide similar Organizational Health.

19. The perceptions of science and arts students about School Organizational Health of secondary schools were found to be statistically different.
5.4 Discussion

The present study which explored the effect of Leadership Behaviour of secondary school principals and Organizational Health on Students’ Academic Achievement is an innovative effort in Pakistani perspective. Researcher believes that findings of this study would add an important facet to the existing body of knowledge in the field. The overwhelming majority of empirical studies which have investigated the effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement are from Western world. According to Bernard Bass (1990), “leadership is frequently stared as the only critical element for achievements of the institution (p.8)”. Similarly, in Pakistani scenario, institutional achievement is primarily measured through Students’ Academic Achievement. The results of present study, which has been conducted in a developing country Pakistan, partially support the claim of earlier researchers like Hofstede (2001) and Nguni, Sleegers, & Denessen (2006). Moreover, these results have been acknowledged and supported by other researchers like Martin (2011) and Chauvin (2010) regarding the influence of Leadership Behaviour and Organizational Health on Students’ Academic Achievement across different cultures throughout the world. Bass & Steidlmeier (1999) establishes that because of the distinctiveness of different cultures there might be exceptions in generalizations. The findings of the present study demonstrate that inspite of the cultural differences between Pakistan and Western world. This is regardless of the fact that Leadership Behaviour theories have their origin and later development in the Western world (Nguni, et al. 2006), this theoretical leadership paradigm is not restricted to the Western world.

The study revealed that Pakistani school principals Leadership Behaviour on the basis of their own perceptions have positive correlation with Students’ Academic Achievement at secondary level. This is supported by the researchers like Waters, Marzano & McNulty (2004) ,
Cudeiro (2005), Waters & Marzano (2007) and Leithwood, Harris & Hopkins (2008). However, teachers of the same school rated their Principals differently. They perceived that there was not a significant correlation between Leadership Behaviour of secondary school principals and Students’ Academic Achievement. This is a contradiction to the supported earlier. Whereas, these results are supported by Pingle (2004). According to him the teachers rated their principals’ leadership practices lower than the principals rated themselves. Moreover, a significant difference between Leadership Behaviour self and observed was found that is also a contradiction as compared to the above referred researches. The reason behind this difference is that principals ranked their own Leadership Behaviour more favorably in all areas of leadership. In the present study, difference between principals and teachers leadership behaviour is due to the contextual differences. In our local context, the principals have to manage the official commitments and have very little time to interact with the students regarding their studies. While, most of the time a direct interaction remains between teachers and students. Therefore, teachers’ perceptions are much stronger than principals and this cross check made the difference in perceptions principals and the teachers very clearer.

The mean for principal responses was greater than teachers’ responses whereas standard deviation for principals was smaller than that of teachers. This shows the greater consistency among principals’ responses. The standard deviation for principals and teachers’ perceptions was also consistent with Kouzes and Posner (2003) models. The researcher is of the point view that greater variability of teachers who served as observers rated their principals’ Leadership Behaviour lower indicates a more realistic approach towards their principals’ Leadership Behaviour in Pakistani context. That is again due to contextual differences and the same is supported by (Nye, 2002) who revealed that “a Leaders behaviour is largely determined by the
perceptions of followers as leadership is the eye of the beholder.” Therefore, it is revealed from
the findings of the present study that there is no direct effect of overall Leadership Behaviour of
secondary school principals on Students’ Academic Achievement. Rather, they have direct
influence on teachers and through them they can influence Students’ Academic Achievement.
However, effect of Leadership Behaviour on Students’ Academic Achievement has been found
much less as compared to School Organizational Health because beta value for Leadership
Behaviour of Principals as perceived by them is greater than beta value for School
Organizational Health. In true sense, effect of Leadership Behaviour self on Students’ Academic
Achievement was not statistically significant. Whereas, the effect of School Organizational
Health on Students’ Academic Achievement was statistically significant. It is exposed from
prediction equation that School Organizational Health had a strong effect on Students’ Academic
Achievement, whereas, Leadership Behaviour of secondary school principals had no significant
effect on Students’ Academic Achievement.

In researcher’s point of view there might not be any ambiguity in the method of self-
rating and cross check through observers’ rating because self-reported data is generally
trustworthy in research as believed by Gonyea (2005). Similarly, the founders of LPI-Self and
LPI-Observers (Kouzes & Posner, 2004) claimed that “until we knew ourselves, we cannot be a
successful leader”. Moreover, achievement requires feedback and the same gives insight to know
the effect of others performance (Kouzes & Posner, 2006). It might be assumed that in this study
principals may have felt the need to expand their responses in order to make they look good to
the researcher. This may be due to the increased accountability mandates because, “In these
times of heightened concern for student learning, educational leaders are being held accountable
not only for the structures and processes they establish, but also for the performance of those
under their charge” (Leithwood & Riehl, 2003, p. 4). Moreover, the principals under study may have felt the need to rank themselves higher fearing that lower ratings could result in an increased investigation of their leadership capabilities.

Furthermore, findings of the study exposed that out of five subscales of Leadership Behaviour of principals that is; Model the Way, Inspired the Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart; Enabling Others to Act was highly ranked and showed highest effect on Students’ Academic Achievement. These results were supported by a number of researchers (Goleman, Boyatzis, & McKee, 2002; Cotton & Hart, 2003; Brower & Balch, 2005; Kouzes & Posner, 2007; Moses, 2010). Some other subscales of Leadership Behaviour like Model the Way and Encourage the Heart do have effect on Students’ Academic Achievement to some extent. Whereas, Inspired the Shared Vision and Challenging the Process have not any effect on Students’ Academic Achievement.

The theoretical background presented in Chapter II demonstrated an important relationship between principals’ Leadership Behaviour, School Organizational Health and Students’ Academic Achievement. Considerably less is known about such a relationship in Pakistani perspectives. Any way this study revealed that there was a strong correlation between School Organizational Health and Students’ Academic Achievement. Also, a strong effect of School Organizational Health on Students’ Academic Achievement was found. This is supported by many of the earlier studies conducted by Hoy & Miskel (1991), Hoy & Tarter (1997).

Moreover, all the subscales of School Organizational Health like Institutional Integrity; Collegial Leadership; Resource Influence; Teacher Affiliation; and Academic Emphasis have strong positive correlations with Students’ Academic Achievement. Also, it has been proved
statistically that these subscales have an effect on Students’ Academic Achievement which has been supported by many researchers like (Bossert, et al., 1982; Hallinger & Murphy, 1985; Murphy, 1990; Hoy & Woolfolk, 1990; Mendez-Morse, 1991; Sammons, Hillman, & Mortimore, 1995; Johnson & Uline, 2005; and Mercurius, 2006). It has been explored that principals have influence on School Organizational Health that has been endorsed by the Edmonds (1979), Pukey & Smith (1983), Brookover & Lezotte (1979), Hoy & Feldman (1987), Akbaba (2001), Korkmaz (2005), Cemaloglu (2006), stating that “Principals are the primary advocates and negotiators for ensuring that teachers have materials and class room supplies to teach the curriculum effectively.” Here, class room materials and supplies are the subsequent parts of organizational health. A subscale of School Organizational Health Resource Influence helps in the effective delivery of curriculum. This results on the good marks of students which is a noticeable reflection of Students’ Academic Achievement. One of the School Organizational Health subscale Collegial Leadership that has a strong effect on Students’ Academic Achievement reported by the present study was also supported by the renowned researches as explored by Korkmaz (2007) and Moses (2010). It is also revealed that Teacher Affiliation and Academic Emphasis, the central subscales of School Organizational Health provide crucial mechanism for positive change for the enhancement of the Students’ Academic Achievement. As Youngs (2001), Hannaway & Carnoy (1993) have the similar findings, and similar features have been discussed by Leithwood et al. (2004) and McRobbie (2001).

The present study also revealed that there was a significant difference in School Organizational Health according to the male and female students’ perceptions, while public and private secondary schools in Punjab observe similar Organizational Health. An important feature of the present study is that arts and science students of 10th grade either they belong to public
secondary schools of the Punjab or private schools acknowledged difference in Organizational Health of their schools.

5.5 Recommendations

On the basis of the findings, conclusions and discussion above, following recommendations have been made:

1. For understanding, interpretation and implication of the study, more evidence is needed conducting studies which incorporate qualitative data collection methods such as observations and interviews from principals, teachers and students.

2. More researches should be realized like effect of parents’ behaviour, effect of teachers’ behaviour and School Health on Students’ Academic Achievement at primary and pre-primary level.

3. Research studies should be conducted to identify the other factors like self-efficacy, motivation and anxiety of principals and teachers, which can influence the Students’ Academic Achievement.

4. The results of the present study indicate the strong relationship between organizational health and students’ academic achievement; it is therefore suggested that policy maker institutions such as Education Department and Ministry of Education should offer professional training for school heads and teachers to enhance their skills to improve the school health that may ultimately enhance the students’ academic achievement.
5. School Organizational Health bears implications to education plans and policies for better provision of the institutional environment to yield better students results.

6. The results highlight the highest effect of an aspect of organizational health ‘Enable Others to Act’ and one facet of leadership behaviour ‘Collegial Leadership on Students’ Academic Achievement; therefore, it is suggested for practitioners (who are school heads in the present case) to shape the ‘School Health’ by giving due priority to these two components in order to enhance the students’ achievement.

7. A similar research should be conducted in rural and urban context so that we are able to compare the Leadership Behaviour of school leaders and status of School Organizational Health in Pakistani context.

8. This kind of study should be conducted in other provinces so that a comprehensive picture of Leadership Behaviour and School Organizational Health can be materialized, which may facilitate better decision making for the improvement of status and outcomes of secondary schools in Pakistan.

9. World has become a global village and there are a lot of advancements in usage of technical gadgets to spare the time for its better utilization towards improvement. So, parents, teachers, principals and society should review the whole scenario and should pay more attention towards the youth.

10. Future researchers should probe into the matter why there is a huge gap between principals and teachers perceptions about the effect of leaders’ behaviour on Students’ Academic Achievement.
11. A cross-cultural study may be conducted using principals, teachers, students and parents perceptions about effect of Leadership Behaviour and School Organizational Health on Students’ Academic Achievement on a large sample.

12. Further research might include other variables such as organizational commitment of teachers and interactive procedural justice to find its effect on students’ achievement.

13. Other areas of inquiry to see the effect of School Organizational Health and teacher absenteeism on achievement or effect of teacher job satisfaction and commitment on Students’ Academic Achievement may be explored.
References


Chauvin, S. L. (2010a). Relationship within principal leadership behavior, Organizational health and academic achievement of at-risk students: A dissertation Submitted to the faculty of Southeastern Louisiana University for the degree of Doctorate in Education.


Sheppard, L. (2007). The relationship between student performance and leadership practices as perceived by principals and selected sit-based decision making (SBDM) committee members of middle schools in region 5 education service center (ESC), Texas; A cohort study. (Unpublished doctoral dissertation) Texas A&M University, Texas.


Appendices

Appendix - A

Dear Principal,

As a final requirement for my Doctoral degree in Educational Leadership and Management at the University of Management & Technology, I am conducting a dissertation research study to identify perceptions regarding the leadership behaviors of school principals. I am writing to request your participation in my study. The study seeks to determine principal leadership behavior, when viewed by principals and teachers both. Your participation in this study is voluntary and confidential. Principal and teacher results of leader behaviors will not be matched, as I will only be looking at group results. If you are interested in a summary of the results of this research, I will be glad to share it with you upon completion.

Please complete the survey carefully and if you have any questions, please feel free to contact me.

I thank you for your thoughtful consideration of my research request and for taking your valuable time to assist.

Sincerely,

Ijaz Ahmad Tatlah
Doctoral Candidate,
Department of Education
School of Social Sciences and Humanities
University of Management and Technology
C-ii, Johar Town, Lahore, Pakistan.

tatlah333@yahoo.com   Cell # 0333-4319981
LEADERSHIP PRACTICES INVENTORY-SELF

INSTRUCTIONS: Please read each statement carefully and assess to what extent you typically engage in the following behaviors. Choose the response number that best applies to each statement and check the right digit in the box to the right of that statement.

1=Rarely, 2=Seldom, 3=Occasionally, 4=Fairly Often, 5=Usually, 6=Very Frequently

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Respondent’s Profile

**Gender**
- Male
- Female

**Marital Status**
- Single
- Married

**Academic Qualification**
- Graduate
- Post graduate
- M Phill
- PhD

**Professional Qualification**
- B.Ed.
- M.Ed.
- Any Other.

**Age (years)**
- Less than 25
- 25 – 34
- 35 – 44
- 45 – 54
- Above 54

**Experience (years)**
- Less than 5
- 5 – 10
- 10 – 15
- 15 – 20
- Above 20

**Designation**
- Junior Headteacher
- Senior Headteacher
- Vice Principal
- Principal
Appendix-C

OHI-E (Organizational Health Inventory for Educational Institutions)

To be filled by the 10th grade students

Directions: Dear students the following are statements about your school, please indicate the extent to which each statement characterizes your school from very frequently occurs to rarely occurs.

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<th>Sometime occurs</th>
<th>Rarely occurs</th>
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<tr>
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<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
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<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>The principal discusses classroom issues with teachers.</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>The principal accepts questions without appearing to criticise or question the teacher.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Extra materials are available if requested.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Students neglect to complete homework.</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Students are cooperative during classroom construction.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>The school is vulnerable to outside pressures.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>The principal is able to influence the actions of his or her superiors.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>The principal treats all faculty members as his or her equal.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>The principal goes out of his or her way to show appreciation to teachers.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>Teachers are provided with adequate materials for their classrooms.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Rating</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<td>---</td>
<td>-----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>13</td>
<td>Teachers in this school like each other.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Community demands are accepted even when they are not consistent with the educational program.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>The principal lets faculty know what is expected of them.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>Teachers receive necessary classroom supplies.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>The principal conducts meaningful evaluations.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>Students respect others who get good grades.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>Teachers feel pressure from the community.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>The principal’s recommendations are given serious consideration by his/her superiors.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>The principal maintains definite standards of performance.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>22</td>
<td>Supplementary materials are available for classroom use.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>Teachers exhibit friendliness to each other.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>24</td>
<td>Students seek extra work so they can get good grades.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>25</td>
<td>Select citizen groups are influential with the board.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>26</td>
<td>The principal looks out for the personal welfare of faculty members.</td>
<td></td>
<td>4</td>
<td>3</td>
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<tr>
<td>27</td>
<td>Teachers express pride in their school.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>28</td>
<td>Teachers identify with the school.</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Question</td>
<td>1</td>
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<td>4</td>
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<td>-------------------------------------------------------------------------</td>
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<tr>
<td>29  The school is open to the whome of the public.</td>
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<tr>
<td>30  A few vocal parents can change school policy.</td>
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<tr>
<td>31  Students try hard to improve on previous work.</td>
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<tr>
<td>32  Teachers accomplish their jobs with enthusiasm.</td>
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<tr>
<td>33  The learning environment is orderly and serious.</td>
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<tr>
<td>34  The principal is friendly and approachable.</td>
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<tr>
<td>35  There is a feeling of trust and confidence among the staff.</td>
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<tr>
<td>36  Teachers show commitment to their students.</td>
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<td></td>
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<tr>
<td>37  Teachers are indifferent to each other.</td>
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</tr>
</tbody>
</table>

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Permission Letter through (E-mail) to use LPI-S and Observer

from: Notkin, Debbie – San Francisco <dnotkin@wiley.com>

to: ijaz tatlah <tatlah@ue.edu.pk>
date: Mon, Aug 6, 2012 at 9:36 PM
subject: RE: using the Leadership Practices Inventory in your research

mailed-by: wiley.com

Dear Tatlah:

This email represents official permission for you to use the LPI Self and Observer instruments in English to collect data for your research. You will need to purchase one copy of each instrument, which you may do through Amazon, through the Wiley website (http://as.wiley.com/WileyCDA/WileyTitle/productCd-0787967955.html and http://eu.wiley.com/WileyCDA/WileyTitle/productCd-0787967270.html) or through our sales representatives. Please let me know if you would like a sales representative to get in touch with you. You may then use the copy you buy for photocopying, and your research—however, you may not distribute the instrument in any other way. All photocopies must keep the copyright notice that is on our publications. Our only other request is that you supply us with a copy of your final paper when it is completed.

Thank you for your interest in the Leadership Practices Inventory.

Debbie

--
Debbie Notkin
x 33182
Appendix –E

Permission Letter through (E-mail) to use OHI-E

From: Anita Hoy <anitahoy@mac.com>
To: Tatlah Ahmed <tatlah333@yahoo.com>
Sent: Tuesday, July 17, 2012 7:21 PM
Subject: Re: Research Tool Permission

You can get the instrument at:

http://waynekhoy.com/ohi-e.html

On Jul 17, 2012, at 4:01 AM, Tatlah Ahmed wrote:

Sir,

I am doctoral candidate in the subject of education at UMT Lahore Pakistan and recently, working on my PhD dissertation under the topic “Effect of Leadership Behaviour and School Organizational Health on Students’ Achievement at Secondary Level”. I need OHI-E instrument developed by your honor (Hoy and Woolfolk, 1993) for the completion of my thesis. Please grant me permission to use this tool. I shall credit this in my research work.

Regards and Best wishes,

Ijaz Ahmad Tatlah

PhD Scholar in Education
Department of Education
School of Social Sciences and Humanities
University of Management and Technology
C-ii, Johar Town, Lahore, Pakistan.

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+92-333-4319981