



Impact of Leadership and Uniqueness on Knowledge Management: A Case of Software Organizations in Peshawar

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Abstract

Knowledge management (KM) is an important process for software organizations seeking to improve their performance, innovation, and competitiveness. Leadership plays a critical role in driving KM initiatives and creating a culture of knowledge sharing and learning. Here are some key findings from the past literature related to the role of leadership in knowledge management, with a focus on software organizations in Peshawar: Leadership commitment: The literature has shown that leadership commitment is a key factor in the success of KM initiatives. Leaders must be committed to KM and communicate its importance to employees, allocate resources to support KM activities, and lead by example. Knowledge sharing culture: Leaders can create a knowledge sharing culture by fostering an environment of trust, encouraging open communication and collaboration, and recognizing and rewarding knowledge sharing behaviours. KM processes: Leaders must also ensure that KM processes are in place to support knowledge sharing and learning. This includes processes for capturing and codifying knowledge, creating communities of practice, and providing training and development opportunities for employees. Technology support: Technology can play an important role in KM, and leaders must ensure that the organization has the right tools and infrastructure in place to support KM activities. Measurement and evaluation: Leaders must also establish metrics to measure the effectiveness of KM initiatives and evaluate their impact on organizational performance. Apart from the primary data, secondary data was also collected from the software organizations in Peshawar. After Data Collection and analysis, it was concluded that Organizational Leadership plays a critical role in driving KM initiatives in software organizations in Peshawar. Leaders must be committed to KM, create a knowledge sharing culture, establish KM processes, provide technology support, and measure and evaluate the effectiveness of KM initiatives. By doing so, organizations can leverage their knowledge assets to improve performance, foster innovation, and achieve strategic goals.

Keywords: knowledge management, leadership, performance

1. Introduction

World has become a global village nowadays and due to that no country can disconnect themselves from others. Due to this globalization and internet age, Pakistan has also become an integral part of the world and the competition has not only become local but also global. This means that any changes taking place in the socio-politico-economic arenas of the western world will also be felt in other parts of the world. Therefore, it is unlikely for an organization to perfectly anticipate the rate as well as kind of changes taking place in its external environment.

Leadership plays a crucial role in knowledge management (KM) as it involves creating and fostering a culture of knowledge sharing and collaboration within an organization. Effective leadership can help establish a clear vision, goals, and objectives for knowledge management and develop strategies for implementing and integrating KM practices into the organization's operations.

Numerous views of knowledge are discussed in several different scientific areas, such as strategy, management, and organization theory literature as well as in philosophy. The different views of knowledge lead to different conceptualizations of (strategic) knowledge management. Our starting point is knowledge as strategic resource. This is in accordance with the business strategy theory, specifically the resource-based view (RBV) of the firm. The main propositions of the RBV is that competitive advantage is based on valuable and unique internal resources and capabilities that are costly to imitate for competitors (Mårtensson, 2000).

1.1. Leadership and its Relevance with Knowledge Management

Establishing a Knowledge Sharing Culture: Leaders can encourage and motivate employees to share their knowledge, skills, and expertise with others in the organization. By creating a culture of openness and collaboration, leaders can facilitate the flow of information and ideas across teams and departments.

Providing Resources and Technology: Leaders can allocate resources and invest in technologies that support knowledge management initiatives, such as document management systems, collaboration tools, and training programs.

Defining Roles and Responsibilities: Leaders can define roles and responsibilities for knowledge management activities, such as knowledge capture, documentation, and sharing. This ensures that everyone in the organization understands their role in the KM process and can contribute to its success (Awad, 2007).

Recognizing and Rewarding Knowledge Sharing: Leaders can acknowledge and reward employees who actively participate in knowledge sharing activities, such as sharing best practices, mentoring, or providing feedback. This incentivizes knowledge sharing and encourages employees to contribute to the organization's learning and growth.

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Leading by Example: Finally, leaders can lead by example and demonstrate the value of knowledge sharing and continuous learning. By modelling the behaviour they want to see in others, leaders can create a culture that values knowledge and supports its ongoing development and dissemination.

In summary, effective leadership is essential for creating a knowledge-sharing culture that supports organizational learning, innovation, and growth. By providing the necessary resources, defining roles and responsibilities, recognizing and rewarding knowledge sharing, and leading by example, leaders can foster a culture of knowledge management that benefits both the organization and its employees.

1.2. What is Leadership

Leadership is the process of inspiring and guiding individuals, groups, or organizations to achieve a common goal or vision. A leader can be anyone who takes the initiative to influence and inspire others towards a shared objective. Effective leadership is crucial for the success of any organization, team, or project, as it enables individuals to work together towards a common purpose and achieve their full potential (Bolden, 2004).

There are many different leadership styles, each with its own strengths and weaknesses. Some leaders are more authoritarian, using their power and influence to direct and control others. Others are more democratic, involving others in decision-making and encouraging collaboration and participation. Some leaders focus on building relationships and supporting the growth and development of their team members, while others are more results-driven and focused on achieving specific goals (Daft, 2014).

Regardless of their style, effective leaders share several important qualities, including:

1.2.1. Vision

A leader must have a clear vision of what they want to achieve and communicate that vision effectively to others. They must be able to inspire and motivate others to work towards that vision.

1.2.2. Communication

Effective communication is essential for any leader. They must be able to express their ideas clearly and listen to others' perspectives, fostering open and honest communication within the team.

1.2.3. Integrity

A leader must be honest, trustworthy, and transparent in their actions and decisions. They must be willing to admit their mistakes and take responsibility for their actions.

1.2.4. Empathy

A leader must be able to understand and empathize with their team members' perspectives and emotions, creating a supportive and positive work environment.

1.2.5. Adaptability

A leader must be able to adapt to changing circumstances and challenges, adjusting their approach and strategies as needed to achieve their goals.

Effective leadership requires a combination of these qualities, along with experience, knowledge, and skills. A good leader must also be able to inspire and motivate their team, providing guidance and support when needed, and helping team members to develop their skills and reach their full potential.

In conclusion, leadership is a critical aspect of any organization, project, or team. Effective leaders inspire, guide, and motivate individuals to work towards a common goal, fostering a positive and supportive work environment. A good leader must possess a combination of vision, communication, integrity, empathy, and adaptability, along with experience, knowledge, and skills, to achieve their objectives and support their team's growth and success.

1.3. Leadership Styles

There are many different leadership styles, each with its own strengths and weaknesses. A leader's style can impact how they communicate with their team, make decisions, and inspire others to work towards a common goal. Here are some of the most common leadership styles:

1.3.1. Autocratic Leadership

An autocratic leader exercises complete control over their team and makes all decisions without input from others. They often use strict rules and expectations to maintain discipline and focus on achieving specific goals. This style can be effective in situations that require quick decisions and clear direction, but it can also stifle creativity and innovation.

1.3.2. Democratic Leadership

A democratic leader involves their team in decision-making, encouraging collaboration and participation. This style can help build trust and teamwork, and it can be effective in situations that require a diverse range of perspectives and creative problem-solving.

1.3.3. Transformational Leadership

A transformational leader inspires and motivates their team to work towards a shared vision or goal. They encourage personal growth and development, and they often use positive reinforcement to recognize and reward their team's accomplishments. This style can be highly effective in creating a positive and engaging work environment, but it can also be challenging to maintain a consistent level of motivation and inspiration.

1.3.4. Servant Leadership

A servant leader focuses on the needs of their team, providing support and guidance to help them reach their full potential. They prioritize empathy, collaboration, and communication, creating a positive and supportive work environment. This style can be highly effective in creating a strong and cohesive team, but it can also be challenging to balance the needs of individuals with the overall goals of the organization.

1.3.5. Laissez-Faire Leadership

A laissez-faire leader provides their team with a high degree of autonomy, allowing them to make decisions and manage their own tasks without much oversight. This style can be effective in situations that require individual initiative and creativity, but it can also lead to a lack of direction and coordination, resulting in a lack of progress towards shared goals (Al-Malki & Juan, 2018).

There are many other leadership styles, and each has its own strengths and weaknesses. A good leader will often use a combination of styles, adapting their approach to fit the needs of their team and the situation at hand. Effective leadership requires a deep understanding of one's team and the ability to adapt to changing circumstances, creating a positive and productive work environment.

1.4. Organizational Leadership

Organizational leadership is an important area of research in the field of management. Over the years, a large body of literature has emerged on this topic, exploring different aspects of leadership within organizations. In this literature review, we will explore some of the key findings and insights from recent studies on organizational leadership.

Leadership Styles: Research has shown that different leadership styles can have a significant impact on organizational performance. Autocratic leadership, for example, has been associated with lower employee morale and higher turnover rates, while transformational leadership has been linked to higher employee engagement and job satisfaction (Hernandez, Eberly, Avolio, & Johnson, 2011). Other studies have explored the impact of democratic, charismatic, and servant leadership styles on various aspects of organizational performance.

1.5. Emotional Intelligence

Another area of research has focused on the role of emotional intelligence in effective leadership. Emotional intelligence involves the ability to recognize, understand, and manage one's own emotions and those of others. Studies have shown that leaders with high levels of emotional intelligence are more effective at managing relationships, resolving conflicts, and creating a positive work environment (Reeves, 2005).

Emotional intelligence (EI) has been a popular topic of research over the past few decades. Research has shown that EI is a critical factor in personal and professional success, and has implications for a range of outcomes including leadership effectiveness, job performance, and job satisfaction. Here are some key findings from recent research on emotional intelligence:

- I. EI and leadership: Research has demonstrated that leaders with high levels of emotional intelligence are more effective than those with low levels. High EI leaders are better able to inspire and motivate their followers, build positive relationships, and adapt to changing situations.
- II. EI and job performance: Several studies have found a positive relationship between EI and job performance, particularly for jobs that require high levels of emotional labor, such as customer service and healthcare. Employees with high EI are better able to manage their emotions and respond effectively to the emotions of others, leading to better job performance.
- III. EI and team effectiveness: Research has shown that teams with high levels of emotional intelligence are more effective than those with low levels. High EI teams are better able to communicate effectively, resolve conflicts, and work collaboratively.
- IV. EI development: Research has demonstrated that EI can be developed through various methods, including training programs, coaching, and feedback. Effective EI development programs should be tailored to the individual needs of participants and should include opportunities for practice and feedback.
- V. Cultural differences in EI: Research has found that cultural differences can impact the way emotional intelligence is expressed and understood. For example, some cultures may place greater emphasis on displaying emotions openly, while others may value emotional restraint (Afzalur Rahim & Minors, 2003).

In conclusion, emotional intelligence is a critical factor in personal and professional success, with implications for leadership effectiveness, job performance, and team effectiveness. EI can be developed through various methods, and cultural differences can impact the expression and understanding of emotional intelligence.

1.5.1. Gender and Leadership

Gender is another important factor that has been explored in the literature on organizational leadership. While there is evidence that women are just as effective as men in leadership roles, they often face unique challenges and biases (Eagly & Carli, 2007). Studies have shown that women are often subject to gender stereotypes, which can limit their opportunities for advancement and make it more difficult for them to be perceived as effective leaders.

1.5.2. Leadership Development

Many studies have explored the role of leadership development programs in enhancing leadership skills and improving organizational performance. These programs can include formal training, coaching, and mentoring, and can be

effective in developing leadership competencies such as communication, decision-making, and strategic thinking (Day, Fleenor, Atwater, Sturm, & McKee, 2014).

Leadership development is a critical process that organizations undertake to improve the skills, abilities, and qualities of their leaders. The following is a brief literature review of some key concepts related to leadership development:

1.5.3. Leadership Development Programs

Research suggests that leadership development programs are effective in enhancing the skills and abilities of leaders. These programs can include classroom-based training, coaching, mentoring, and experiential learning opportunities.

1.5.4. Personalized Leadership Development

Personalized leadership development programs that are tailored to the individual needs and preferences of leaders have been found to be particularly effective. These programs can help leaders identify their strengths and weaknesses, set goals, and develop action plans to improve their performance.

1.5.5. Leadership competencies

Research has identified several key competencies that are essential for effective leadership, including strategic thinking, communication, collaboration, and emotional intelligence. Leadership development programs can focus on developing these competencies.

1.5.6. On-the-Job Learning

On-the-job learning, such as stretch assignments, job rotations, and project-based work, can be an effective way to develop leadership skills. This approach enables leaders to apply their learning in real-world situations and receive feedback from colleagues and supervisors.

1.5.7. Mentoring

Mentoring can be a valuable way for leaders to learn from more experienced colleagues and receive guidance and support. Mentoring relationships can help leaders develop their skills, expand their networks, and gain new perspectives on leadership.

1.5.8. Cross-Cultural Leadership

In today's globalized business environment, cross-cultural leadership has become an important area of research. This involves understanding how cultural differences can impact leadership styles, communication, and decision-making. Studies have shown that leaders who are able to adapt their leadership style to different cultural contexts are more effective at leading diverse teams and achieving organizational goals (House, Hanges, Javidan, Dorfman, & Gupta, 2004).

In conclusion, the literature on organizational leadership is vast and diverse, covering a wide range of topics and issues. It highlights the importance of effective leadership in achieving organizational goals, and provides valuable insights into the different factors that influence leadership effectiveness. By understanding these insights, organizations can develop better leadership strategies and programs to improve their performance and competitiveness.

1.6. Knowledge Management

Knowledge management is the process of creating, sharing, using, and managing knowledge and information within an organization. It involves identifying the knowledge assets of an organization, creating systems and processes to manage and share that knowledge, and leveraging that knowledge to achieve the organization's goals.

Knowledge management (KM) can help organizations improve their performance, increase innovation, and maintain a competitive advantage. It can also improve communication, collaboration, and decision-making within the organization. Some common approaches to knowledge management include:

1.6.1. Knowledge Creation

Organizations can create new knowledge by encouraging innovation, experimentation, and continuous learning. This can involve research and development, training programs, and knowledge-sharing initiatives.

1.6.2. Knowledge Capture

Organizations can capture and store knowledge in various forms, including databases, documents, and multimedia. This can involve creating processes for capturing knowledge from employees, customers, and other stakeholders.

1.6.3. Knowledge Sharing

Organizations can share knowledge through various channels, including training programs, communities of practice, and online forums. This can involve creating processes for sharing knowledge among employees and with external stakeholders.

Knowledge sharing in organizations refers to the process of transferring knowledge from one individual or group to another within an organization. Effective knowledge sharing enables organizations to capture and leverage the expertise, experience, and best practices of employees, and to create a culture of continuous learning and improvement. Here are some ways in which knowledge sharing can be beneficial to organizations:

- Improved decision-making: Knowledge sharing enables employees to access a broad range of information, expertise, and perspectives, which can help them make better decisions and solve problems more effectively.
- Increased innovation: Knowledge sharing can spark innovation by enabling employees to share ideas, experiment with new approaches, and create new solutions to business problems.

- **Better performance:** Knowledge sharing can lead to improved performance by providing employees with the information, tools, and resources they need to do their jobs more effectively and efficiently.
- **Enhanced collaboration:** Knowledge sharing can facilitate collaboration by breaking down silos and enabling employees to work together across departments, teams, and functions.
- **Facilitated learning:** Knowledge sharing can facilitate learning by providing employees with opportunities to learn from each other, receive feedback, and improve their skills and expertise.

To encourage knowledge sharing, organizations can implement various strategies, such as creating communities of practice, establishing knowledge sharing platforms, providing training and mentoring programs, and recognizing and rewarding employees who contribute to knowledge sharing. Overall, knowledge sharing is essential for organizations to capture and leverage their knowledge assets, promote collaboration and innovation, and foster a culture of continuous learning and improvement.

1.6.4. Knowledge Application

Organizations can apply knowledge to improve their products, services, and processes. This can involve using knowledge to solve problems, make better decisions, and innovate.

- **Knowledge application in organizations** refers to the process of using knowledge to solve problems, make decisions, and create value. It involves applying knowledge that has been captured, shared, and preserved to specific business contexts and situations. Here are some ways in which knowledge application can be beneficial to organizations:
- **Improved decision-making:** By applying knowledge to specific business situations, organizations can make better decisions that are informed by expertise, experience, and best practices.
- **Increased innovation:** Knowledge application can spark innovation by enabling employees to draw on a broad range of ideas and perspectives, experiment with new approaches, and create new solutions to business problems.
- **Better performance:** Knowledge application can lead to improved performance by providing employees with the information, tools, and resources they need to do their jobs more effectively and efficiently.
- **Enhanced customer service:** By applying knowledge to customer interactions, organizations can provide better service by understanding customer needs, anticipating problems, and providing tailored solutions.
- **Facilitated learning:** Knowledge application can facilitate learning by providing employees with opportunities to apply what they have learned to real-world situations, receive feedback, and improve their skills and expertise.

Overall, knowledge application is essential for organizations to realize the full value of their knowledge assets. By applying knowledge to specific business contexts and situations, organizations can improve decision-making, increase innovation, enhance performance, provide better customer service, and facilitate learning and development.

1.6.5. Knowledge Preservation

Organizations can preserve knowledge by creating systems and processes for archiving and retrieving information. This can involve creating a knowledge repository or database and ensuring that knowledge is properly documented and stored.

Knowledge preservation refers to the process of capturing, storing, and protecting knowledge assets to ensure their availability for future use. Knowledge preservation is critical for organizations because it helps them retain valuable knowledge and expertise that can be lost due to employee turnover, retirement, or other factors.

There are several methods that organizations can use to preserve knowledge, including:

- **Documenting knowledge:** Organizations can document knowledge through various means such as creating manuals, procedures, or process maps. This information can be stored in a central repository that is accessible to employees.
- **Codifying knowledge:** Organizations can convert tacit knowledge, which is knowledge that is not easily documented or transferred, into explicit knowledge. This can be done through training, mentoring, and coaching programs.
- **Implementing knowledge management systems:** Organizations can implement knowledge management systems, such as databases, wikis, or content management systems that allow employees to easily store, share, and access knowledge.
- **Conducting knowledge audits:** Organizations can conduct knowledge audits to identify critical knowledge assets and ensure that they are being properly preserved.
- **Creating communities of practice:** Organizations can create communities of practice, which are groups of employees who share a common interest or expertise, to facilitate knowledge sharing and preserve specialized knowledge.

Overall, knowledge preservation is essential for organizations to ensure the retention and accessibility of valuable knowledge assets. By preserving knowledge, organizations can improve their ability to respond to challenges, innovate, and succeed in a rapidly changing business environment.

Effective knowledge management requires a combination of technology, culture, and processes. It involves creating a culture of continuous learning and knowledge-sharing and developing systems and processes to support that culture.

Knowledge management can be a challenging process, but it can have a significant impact on an organization's performance, innovation, and competitiveness.

1.7. Knowledge Identification and Creation

Knowledge identification and creation are important aspects of knowledge management that involve discovering and generating new knowledge within an organization. In this literature review, we will explore some of the key findings and insights from recent studies on knowledge identification and creation.

1.7.1. Knowledge Identification

Knowledge identification is the process of identifying the knowledge assets and resources that exist within an organization. This involves identifying both explicit and tacit knowledge and creating processes for capturing and sharing this knowledge. Studies have shown that knowledge identification is important for creating a culture of continuous learning and knowledge-sharing within an organization (Argote & Ingram, 2000).

1.7.2. Communities of Practice

Communities of practice are groups of individuals within an organization who share a common interest or expertise. These groups provide a forum for knowledge sharing and learning and can be effective in creating new knowledge within the organization (Wenger & Snyder, 2000). Studies have shown that communities of practice can be effective in generating new ideas, solving problems, and improving organizational performance.

1.7.3. Organizational Culture

Organizational culture is an important factor in knowledge identification and creation. A culture of innovation and experimentation can foster creativity and generate new ideas, while a culture of risk aversion can stifle creativity and limit knowledge creation (Nonaka & Takeuchi, 1995). Studies have shown that organizations with a strong culture of learning and knowledge-sharing are more likely to be innovative and successful.

1.7.4. Knowledge Creation

Knowledge creation is the process of generating new knowledge within an organization. This can involve research and development, experimentation, and collaboration. Studies have shown that knowledge creation is important for maintaining a competitive advantage and driving innovation within an organization (Nonaka & Takeuchi, 1995). Knowledge creation can also involve leveraging external knowledge sources, such as partnerships with other organizations, to generate new ideas and insights.

1.7.5. Social Networks

Social networks are an important factor in knowledge identification and creation. Studies have shown that social networks can facilitate knowledge-sharing and collaboration, and can be an effective way to generate new knowledge within an organization (Hansen, 1999). Social networks can be formal, such as communities of practice, or informal, such as peer networks.

In conclusion, the literature on knowledge identification and creation highlights the importance of creating a culture of learning and knowledge-sharing within an organization. This involves creating processes for identifying and capturing knowledge, fostering communities of practice, and encouraging experimentation and innovation. By understanding these insights, organizations can develop better strategies and programs for knowledge identification and creation, and can leverage this knowledge to achieve their goals and maintain a competitive advantage.

1.8. Knowledge Collection and Capture

Knowledge collection and capture is an important aspect of knowledge management that involves acquiring and recording knowledge within an organization. In this literature review, we will explore some of the key findings and insights from recent studies on knowledge collection and capture.

1.8.1. Data Collection

Knowledge collection often begins with data collection. This involves collecting data from a variety of sources, including internal and external sources. Studies have shown that effective data collection is essential for knowledge management, as it provides the foundation for creating and sharing knowledge (Nonaka, Toyama, & Konno, 2000).

1.8.2. Knowledge Mapping

Knowledge mapping is a technique used to identify the knowledge assets within an organization. This involves creating a visual representation of the knowledge resources, including both explicit and tacit knowledge. Studies have shown that knowledge mapping can be effective in identifying knowledge gaps and opportunities for knowledge sharing (Gupta & Govindarajan, 2000).

1.8.3. Knowledge Repositories

Knowledge repositories are systems used to store and share knowledge within an organization. These systems can include databases, wikis, and other information management tools. Studies have shown that knowledge repositories can be effective in facilitating knowledge sharing and collaboration, and can improve organizational performance (Alavi & Leidner, 2001).

1.8.4. Information Technology

Information technology plays an important role in knowledge collection and capture. Information technology tools such as content management systems, search engines, and collaboration platforms can be used to facilitate knowledge collection and sharing (Davenport & Prusak, 1998). Studies have shown that organizations that use information technology to support knowledge management are more likely to be successful in capturing and sharing knowledge.

1.8.5. Learning Organization

A learning organization is an organization that values continuous learning and knowledge-sharing. Studies have shown that creating a learning organization culture can be an effective way to facilitate knowledge collection and capture (Senge, 1990). Learning organizations encourage employees to share knowledge and provide the tools and resources to support knowledge collection and sharing.

In conclusion, the literature on knowledge collection and capture highlights the importance of effective data collection, knowledge mapping, and the use of knowledge repositories and information technology to support knowledge management. Creating a learning organization culture can also be an effective way to facilitate knowledge collection and capture. By understanding these insights, organizations can develop better strategies and programs for knowledge collection and capture, and can leverage this knowledge to achieve their goals and maintain a competitive advantage.

1.9. Importance of Leadership in Software Organizations

Leadership is incredibly important in software companies for a number of reasons. Here are a few key reasons why leadership is essential in software companies:

1.9.1. Setting a Vision

Software companies need strong leadership to set a clear vision for the company. Leaders must define what the company stands for, what its goals are, and what kind of culture it wants to create. Without a strong vision, companies can easily become directionless and lose their competitive edge.

1.9.2. Managing Complexity

Software development is a complex process that requires a lot of coordination and management. Leaders must be able to manage the complexity of software development by organizing teams, allocating resources, and making strategic decisions about which projects to pursue.

1.9.3. Building a Strong Team

Building a strong team is essential in software companies. Leaders must be able to attract and empower their team members so that they can take the ownership of their work. A strong team is essential for delivering high-quality software products.

1.9.4. Driving Innovation

Software companies need to be constantly innovating in order to stay ahead of the competition. Leaders must create an environment that supports experimentation and risk-taking, and they must be able to inspire their team members to come up with creative solutions to complex problems.

1.9.5. Creating a Culture of Excellence

Leaders must set high standards for quality and excellence in software development. This involves creating processes and procedures that ensure that software products are thoroughly tested and meet the needs of users.

Therefore, it can be argued that leadership is essential in software companies for setting a vision, managing complexity, building a strong team, driving innovation, and creating a culture of excellence. Without strong leadership, software companies can easily become directionless and lose their competitive edge in an increasingly crowded market.

1.10. Knowledge Management in Software Organizations

Knowledge management (KM) is a process of identifying, capturing, sharing, and utilizing knowledge within an organization. In software companies, KM is essential for achieving business goals, improving customer satisfaction, and staying competitive in a rapidly changing industry. Here are some key principles of knowledge management in software companies:

Knowledge sharing: In software companies, knowledge sharing is essential for promoting collaboration and innovation. Leaders must create an environment that encourages employees to share their knowledge and expertise with one another.

1.10.1. Documentation

Effective knowledge management requires the creation and maintenance of documentation that captures key information about software products, development processes, and best practices. This documentation must be organized and accessible to all employees who need it.

1.10.2. Learning and Development

Leaders must provide opportunities for employees to learn and develop their skills, both through formal training programs and on-the-job learning. This helps employees stay up-to-date with the latest technology and best practices, and it also helps retain top talent.

1.10.3. Technology

KM in software companies often involves the use of technology to capture, store, and share knowledge. This can include document management systems, knowledge bases, and collaboration tools.

1.10.4. Continuous Improvement

Effective KM requires a commitment to continuous improvement. Leaders must regularly review and evaluate KM processes and procedures and make changes as necessary to improve efficiency and effectiveness.

1.10.5. Data-Driven Decision Making

KM can also be used to support data-driven decision making in software companies. By capturing and analysing data about software products and development processes, leaders can make more informed decisions about resource allocation, project prioritization, and customer needs.

Overall, knowledge management is essential in software companies for promoting collaboration, improving productivity, and staying competitive. By focusing on knowledge sharing, documentation, learning and development, technology, continuous improvement, and data-driven decision making, leaders can create an environment that supports innovation and excellence in software development.

1.11. Research Significance

This study can be significant for both Academic Sector and Professional Sector.

a) From the academic point of view; as this study will aim to make an attempt to add more knowledge to this important issue and therefore can be beneficial for the future studies in the field of Organizational Leadership and Knowledge Management.

b) From the practical point of view, as the topic of the Leadership and Knowledge Management is one of the core elements for getting positive results. So, it will be very vital for the institutes to identify the importance of Leadership in Knowledge Management which can lead the organization to the level of success.

1.12. Research Questions

The researcher formulated the following Research Questions:

Q1: What is the role of Organizational Leadership in Knowledge Management in Software Company?

Q2: How does Organizational Leadership impacts the Knowledge Management software company?

2. Research Variables

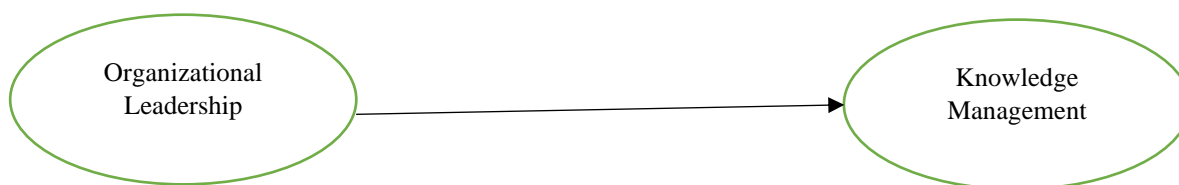


Figure 1

2.1. Hypothesis

After reviewing the past literature written on the practices of knowledge management in different regions other than in Peshawar Pakistan, the researcher formulated the following hypothesis:

H1: The Organizational Leadership is significantly related with organization's Knowledge Management practices.

H2: The Organizational Leadership is significantly related with organization's Knowledge Management practices.

3. Methodology

3.1. Research Design

This research was quantitative in nature so it was designed to statistically study and find out the role of organizational leadership towards knowledge management.

3.2. Research Sample

In order to conduct an appropriate and comparative study, A total sample of 120 employees of software houses and companies were taken as sample size for this study. 101 responses were recorded so our response rate was 84%. Peshawar was the target city for this study.

3.3. Data Collection

Data was collected by the help of following two instruments:

- i. Organizational Leadership Questionnaire (OLQ). This instrument was developed by (Pareek, 2003)
- ii. Knowledge Management Assessment (KMA). This data collection instrument was developed by (Maier & Moseley, 2003)

4. Data Processing, Analysis Techniques and Interpretation

SPSS software was then used to analyse the data. Regression and Correlation analysis was used to find relationship between Organizational Leadership and Knowledge Management

4.1. Instrument Reliability

Table1: Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded ^a	0	.0
	Total	40	100.0

a. List wise deletion based on all variables in the procedure.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.671	2

The Cronbach's Alpha reliability statistics is done in order to find out the reliability of instrument used for the data gathering process. The acceptable value of Cronbach's Alpha according to many researchers is above 0.60

Table 3: Descriptive Analysis-Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Femal	1	1.0	1.0	1.0
	Female	13	12.9	12.9	13.9
	Male	87	86.1	86.1	100.0
	Total	101	100.0	100.0	

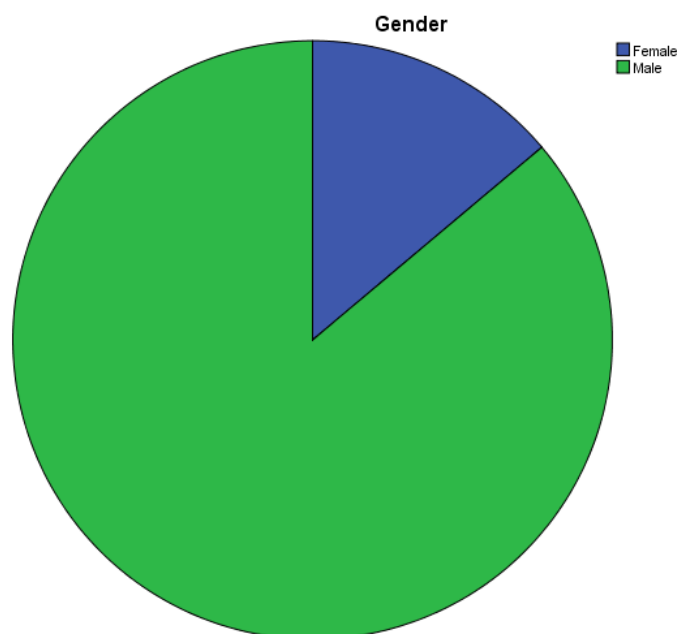
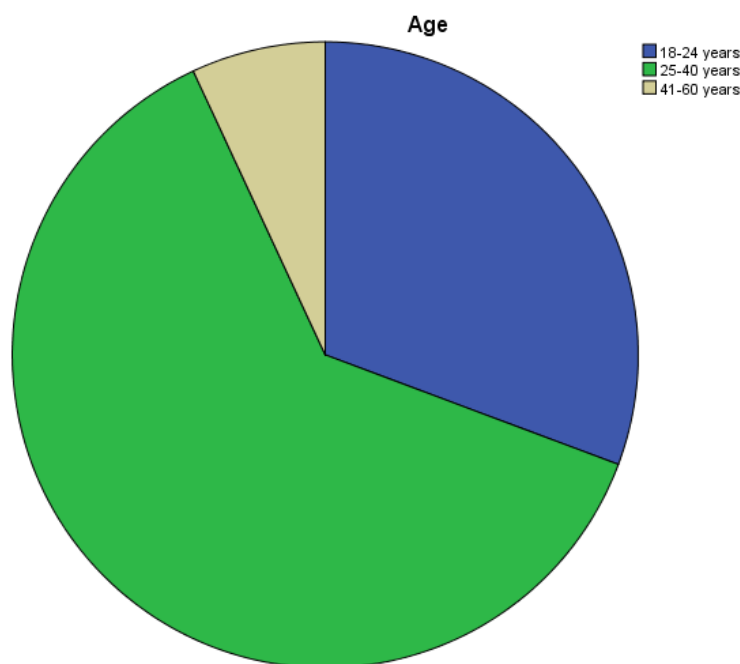


Figure 2

Table 4: Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-24 years	31	30.7	30.7	30.7
25-40 years	63	62.4	62.4	93.1
41-60 years	7	6.9	6.9	100.0
Total	101	100.0	100.0	

**Figure 3****Table 5: Education**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Bachelors	89	88.1	88.1	88.1
Masters	12	11.9	11.9	100.0
Total	101	100.0	100.0	

The Minimum shows the lowest value of variable while columns of Maximum tell us about the highest data value of the particular variable with Mean showing the average data value of the variable. The standard deviation (SD) quantifies variability. Average variance is measured through Standard deviation and is one of the prominent elements in statistical analysis. In any set of data, the SD measures how spread out numbers are from the average value. For example, the above SD value of Organizational Leadership means that it is .422 percent away from the mean.

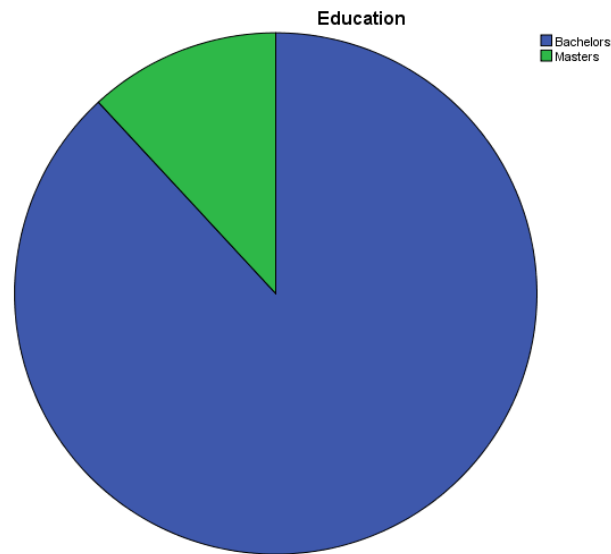


Figure 4

Table 6: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Organizational Leadership	101	2.83	4.50	3.1625	.42285
Knowledge Management	101	2.88	4.76	3.2196	.45389
Valid N (list wise)	101				

4.2. Correlation Analysis

Table 7: Correlations

		Organizational Leadership	Knowledge Management
Organizational Leadership	Pearson Correlation	1	.348**
	Sig. (2-tailed)		.000
	N	101	101
Knowledge Management	Pearson Correlation	.348**	1
	Sig. (2-tailed)	.000	
	N	101	101

The Pearson's correlation test is used for measuring the strength and direction of association which exists between two variables measured on at least an interval scale. Pearson's correlation is used for understanding whether there is a relationship between the variables. The p-value of 0.348 explains the Knowledge Management within the organization. The value tells us a significant relationship among the variables.

4.3. Regression Analysis

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.348 ^a	.121	.112	.42774

a. Predictors: (Constant), Organizational Leadership

Table 9: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	2.488	1	2.488	13.599	.000 ^b
Residual	18.113	99	.183		
Total	20.601	100			

a. Dependent Variable: Knowledge Management

b. Predictors: (Constant), Organizational Leadership

Table 10: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.040	.323		6.321	.000
	Organizational Leadership	.373	.101	.348	3.688	.000

a. Dependent Variable: Knowledge Management

Regression analysis uses various explanatory variables for predicting the outcome of the respondent variable. Regression analysis is mainly used to model the association between 2 variables - explanatory variable and the response variables.

A positive value is normally an acceptable value having sig value of less than 0.05. R Square in Linear Regression has to be positive and it is preferred that the value should be close to 100%

The coefficient for Organizational Leadership is 0.373. So, for every unit change in Organizational Leadership, a 0.373-unit change in Knowledge Management is predicted, holding all other variables constant.

The coefficient for Organizational Leadership (0.373) is statistically significant and positive because its p-value of .000 is not greater than .05

5. Conclusion

To conclude this research, organizational leadership can have a significant impact on knowledge management. Effective leadership can create a culture of knowledge sharing and encourage employees to collaborate and learn from each other. Leaders can also facilitate the development of knowledge management systems and processes, provide resources and support for knowledge sharing, and promote continuous learning and improvement.

On the other hand, ineffective or poor leadership can hinder knowledge management efforts. Leaders who do not prioritize knowledge sharing and collaboration, do not allocate resources for knowledge management, or do not provide support for learning and development may create a culture of silos and hinder the sharing and use of knowledge within the organization.

Therefore, it is important for organizational leaders to understand the value of knowledge management and actively support its implementation and ongoing improvement. Effective leadership can help create a knowledge-driven organization that is better equipped to respond to challenges and opportunities in a rapidly changing business environment.

5.1. Discussion

Leadership is critical in knowledge management for several reasons:

- Creating a culture of knowledge sharing: Leaders play a significant role in shaping the organizational culture. They can create a culture that values knowledge sharing and encourages employees to collaborate, learn from each other, and innovate.

- Developing knowledge management systems and processes: Leaders can support the development and implementation of effective knowledge management systems and processes that enable employees to capture, organize, and share knowledge across the organization.
- Providing resources and support: Leaders can allocate resources and provide support for knowledge management initiatives, such as training programs, knowledge sharing platforms, and communities of practice.
- Encouraging continuous learning and improvement: Leaders can promote a culture of continuous learning and improvement by providing opportunities for employees to develop their skills and knowledge, and by rewarding and recognizing employees who contribute to knowledge sharing and innovation.
- Ensuring alignment with organizational goals: Leaders can ensure that knowledge management initiatives are aligned with the organization's goals and objectives, and that they contribute to the organization's overall success.

5.2. Summary of Findings

The results of analysis clearly show that Organizational Leadership has a positive impact on the Knowledge Management. The correlation values were also positive while the p-values were less than 0.05.

The table shows key findings and which hypothesis are accepted or rejected:

Table 11

Hypothesis	Accepted/Rejected	Significant Level
H1 - The Organizational Leadership is significantly related with organization's Knowledge Management practices.	Accepted	0.000

Table: Acceptance/Rejection of Hypothesis

Knowledge acquisition, integration, sharing, and reconfiguration are all topics covered by knowledge management. Developing fresh perspectives and information could boost organisational creativity and inspire staff to find solutions (Khedhaouria and Jamal, 2015). Acquiring knowledge is essential for realising changes in the corporate environment and discovering the best approaches to meet consumer expectations (Sindakis et al., 2015). Knowledge integration is also crucial. Knowledge is shared and combined in knowledge integration to produce goods and services of greater quality (Lee and Kim, 2001).

More customer focus, enhanced product and service quality, and increased revenue are all examples of how integration enhances financial and non-financial success. Additionally, through fostering relationships with and awareness of the external world, knowledge reconfiguration enables businesses to actively respond to environmental changes. Knowledge is important for enhancing organisational performance, as demonstrated by Fugate et al. (2009), Lee and Choi (2003), Mills and Smith (2011), and Pathirage et al. (2007). Knowledge management thus has a favourable impact on organisational performance.

5.3. Theoretical Contributions

There are several implications for theory and research from the current work. First, while earlier research (Garc'a-Morales et al., 2012; Zack et al., 2009) has established the significance of knowledge management and organizational leadership for performance outcomes, the current study contributes to the relatively sparse body of literature on knowledge management and organizational leadership develops a greater understanding of the direct impact on performance.

The current study also creates a fresh and modern definition of knowledge management. This thesis is significant because it provides fresh perspectives on the ways in which organizational leaders influence internal organisational resources. Furthermore, specifically contend that organizational leaders may successfully apply organisational strategy. The current study proposes fresh insights by recognising transformational leadership as a primary influence on internal organisational resources, drawing on social capital theory and the knowledge-based view. Hence, transformational leadership is a catalyst for successfully implementing deliberate changes to a firm's internal resources as change becomes more valued.

5.4. Social capital theory

According to Adler and Kwon (2002), there are three different perspectives included in social capital theory. The first (external) strategy, which is influenced by network theorists (such as Burt, 1992), emphasises the significance of social networks in the formation of ties between actors that may facilitate actions and ultimately improve the performance of individuals and organisations. The connections between individuals will span a large portion of a society, going far beyond the confines of a certain institution. Hence, according to Wacquant and Bourdieu (1992), social capital is a resource that may be used by actors who have mutually beneficial interactions and social networks. The second approach (internal) emphasises the value of internal structures in enhancing cohesion to accomplish goals and measures social capital as a result of internal characteristics of collective actors (Adler and Kwon, 2002). This definition of social capital could be expanded to include "the existence of a particular set of informal values or standards shared among members of a group that permit collaboration among them" (Fukuyama, 1995: 378). The third strategy uses both external and internal strategies and emphasises that an employee's relationships with other individuals are both internal to the company and external to the person (Adler and Kwon, 2002).

5.5. Practical Implications

Implications on knowledge management are the effects or consequences of managing knowledge within an organization or a system. Knowledge management is the process of identifying, organizing, storing and sharing information that is relevant and useful for achieving goals and solving problems. Knowledge management can have various implications on different aspects of an organization or a system, such as:

Innovation: Knowledge management can foster innovation by enabling the creation, acquisition, sharing and use of new and existing knowledge among employees, customers, partners and stakeholders. Innovation can lead to improved products, services, processes and outcomes that can enhance the competitive advantage and performance of an organization or a system (Ingram, Peake, Stewart, & Watson, 2019).

Employee engagement: Knowledge management can enhance employee engagement by reducing the learning curve, facilitating collaboration, empowering decision-making and recognizing contributions. Employees can access accurate and critical information, learn from others' experiences, share their insights and ideas, and apply their knowledge to their tasks and projects. Employee engagement can boost productivity, creativity and retention for an organization or a system (Pellegrini, Ciampi, Marzi, & Orlando, 2020).

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