Digital Leadership, Institutional Commitment, and Future Directions for Transforming Higher Education In Pakistan: A Mixed-Method Study

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ABSTRACT

Digital technology has permanently impacted how educational institutions work. Digitalisation is changing organisations, the way people work, and the way things are done, just like moveable type printing sped up the course of history. This is making new problems for leaders to deal with. Researchers in the field of education have been trying to figure out this complex phenomenon, but the results have come in bits and pieces from different fields and don't appear to fit together into a cohesive picture. The goal of this study is to investigate how college leaders in Pakistan comprehend digitalisation and what digital skills they need to lead colleges in the digital age. Mixed-method research was employed with semi-structured interviews were the main way to gather data. The qualitative study included 5 teachers, 5 and students from each leader from the colleges of Pakistan. The study also used a survey approach that was both quantitative and descriptive. The stratified random sampling was employed to choose 150 people to answer the survey. These people were faculty members and administrative staff from the faculty of social sciences at the college. Data gathered using a structured questionnaire with five-point Likert scale items. A pilot study and feedback from experts were used to check the survey tool. We used SPSS (version 26) to look at the data. We used descriptive statistics (mean and standard deviation) and inferential statistics (ANOVA) to find the relationships and differences between different demographic and professional groups. The mean scores for leadership practices showed a strong connection to transformative leadership principles (M=4.21, SD=0.65). The ANOVA results showed that people in different job roles had very different ideas about how effective leadership was (F(3.146) =5.47, p<0.01). Faculty members rated leadership more positively than administrative staff. The analysis showed that leadership behaviours have a direct effect on social development initiatives, accounting for 48% of the variance (R²=0.48). The results showed that digital tools improved communication and administrative efficiency. College leaders also recognise that AI could help them be better leaders, but they also talk about the problems that come with using these technologies. The report stresses the need for personalised

professional development, stronger infrastructure, and ongoing support to assist college leaders use digital and AI tools in their daily leadership work. The results show how important transformative educational leadership is for Pakistan's progress. The results demonstrate that college leaders think of digitalisation as a broad and complicated idea that includes technological, pedagogical, administrative, and organisational problems at all levels of the college.

Key Words: *College leaders, Digitalization, AI, Challenges, Educational Leadership*

INTRODUCTION

Educational leadership refers to the capacity to inspire and guide them towards achieving a goal. This paper investigates some aspects of current leadership thinking in a digitalized world. As the global socioeconomic landscape shifts, there is an increasing demand for capable and visionary leaders. A student leader should be able to inspire, direct, and lead others to attain a goal. This article talks about the hard job of helping students improve their leadership qualities. It talks about the good and bad things of this life-changing event.

The study's purpose was to be analytical and look at the issues and perspectives of developing student leaders at the college level. The study is meant to add and to build on what is already known by looking for examples of how teachers lead and aid their pupils in different ways. The survey's goal was to find out if teachers and student leaders often participate in extracurricular, curricular, and co-curricular activities, how they feel about these activities, what problems and concerns they have, and how they are dealing with them.

Digitalisation has made its way into colleges and society (Makhdum et al, 2023). The study's purpose is to find out what people think about the leadership currently, which is good for the reputation of colleges. The analytical framework integrates new ideas about leadership from sociology, psychology, and research on complex systems. The article discusses about several types of organisational leadership, their strengths and weaknesses, and how to make leadership happen in a digital age. The theoretical and practical importance is that it shows that digitalisation and a leadership ecosystem are linked (Bakardjieva and Dumitrica, 2018), which means that educational leaders can communicate in many ways, their relationships are intricate, and their work is always the same.

Leadership in and Across the Education System

Without ethics in leadership, the education system is useless. It is a field where leaders must follow certain moral values and ideals to change, motivate, and control how students think (Kahai & Avolio 2006). Things have changed in the college setting. Because of new technologies and ideas, new modes of teaching, preparing, and communicating have been developed to help students learn the material and follow the syllabus. The main goal of the authorities in the education system right now is to find ways to teach students how to act in a moral and democratic way.

Followers talk about the traits and features of an ethical leader. Leaders choose followers depending on what they want for themselves. The leader wants everyone to work together as a team for a common goal. Leader is a real and transformational leader who encourages followers to think beyond their own needs. He or she establishes honest relationships with followers and works on developing teams to reach goals that help the overall organization.

Moral/ethical leaders are honest leaders who convey facts transparently. They are fair and unbiased and treat everyone equally. Moral leaders give importance to kindness and behave in a way that is always useful and beneficial to the team (Faisal, et. al., 2025). This kind of leadership appreciates and rewards those who come up with innovative ideas and encourages those who take the initiative (Kahai & Avolio 2006). They also expect others to do the right thing as they do by leading from example. They do not want their followers to overlook ethics. All these discussed traits are hard to practice now-days. Several factors such as lack of resources, job insecurity, and workload make it hard to follow ethics and are responsible for it.

Moralism and being ethical should be fundamental for leadership, especially in the educational field (Kahai, Sosik & Avolio, 2013). Moral leaders should create an environment which is beneficial for students. These leaders should build teamwork culture in the organization. This leadership can bring people together and build an authentic, engaging, caring and honest culture based on ethical principles to achieve results (Kidwell & Sprague, 2009).

LITERATURE REVIEW

A leader who is experienced, authentic, accountable and obeys rules, knows about religious and cultural values is the right person for leadership role and only he/she can practice and implement moral values which are hidden but should be an integral part of curriculum (Malik, & Janjua, 2021). Values like work ethics, punctuality, respecting opinions of co-workers and pupils can only inspire and transform the future generations into nation (Makhdum et. al., 2022).

Moral leaders should consistently perform tasks with integrity and deep commitment to do the right thing for teachers for the right reason, even if it is inconvenient and unprofitable. Ethical leaders should make all the decisions just (International Islamic University Islamabad, 2023). Followers must not be treated differently even if they sometimes fail to complete tasks in time. The leader should treat all the members in the same manner. But here we have some challenges in Higher education institutions of Pakistan having lack of resources, faculty overburdened by the workload as they must do supervision, administrative task along with teaching (Higher Education Commission, 2022). We see very few professional development programs as well as insufficient leadership practices for leaders.

There are a few common dilemmas which the leaders may have to face as if sometimes people try to take short cuts in making decisions. Age of acceleration has brought many challenges too in educational institutions like faculty are needed to learn new skills, have time constraints etc. There are unrealistic deadlines for activities for teachers and sometimes they compromise on health, go through emotional and physical stress, while trying to complete their tasks timely with lack of resources (Purvanova, & Bono, 2009). In such situations, it becomes very hard for teachers to perform in an inspiring and motivational manner, which is necessary to build the character of the students. Leaders should create a favorable environment in which followers are encouraged and motivated to inculcate the moral values in their pupils in true spirit. While hiring leaders their ethical values should be tested psychologically that how they should behave and maintain their ethics (Kahai, Sosik & Avolio, 2013. One must be consistent in his/her behavior. Role modelling plays an important role that how leaders inspire and makes followers loyal to the organization and is a role model for them. Ethical leaders present moral and ethical examples for their faculty and students by good deeds, which is beneficial for moral upbringing of students. One should stand over right decision, provision of resources, job security, can help leaders to maintain moral values (International Islamic University Islamabad, 2023). Hidden curriculum plays a significant role in moral development; they develop a systematic educational method that has a lot of impact on the lives of students (Malik, & Janjua, 2021). Through the hidden curriculum, teachers can influence the behavior,

experience and skills of students. It is an informal type of curriculum that includes ethics and moral knowledge and eth unspoken cultural along with societal knowledge that is essential for students to acquire to succeed in a learning environment (International Islamic University Islamabad, 2023).

Instructional Leadership for Better Learning

Instructional Leadership includes the traits and qualities that are possessed by successful and practical educational leaders who are a source of inspiration and optimism. Such instructional leaders open the pathway for others by providing each individual equal treatment with integrity and honesty. They support students and provide them with the inspiration and innovation to think out of the box and to achieve individual high goals and aims. Instructional leaders use their communication skills and abilities to tackle with the students and help them make informed decisions. They also help them to enhance their thinking abilities and ideas. College principals and teachers are mostly regarded as instructional leaders who along with managing curriculum are also responsible for the students' success.

Instructional Leadership empowers students' verbal and written communication skills whether it may be through email writing or holding personal one-to-one meetings with students to assess their knowledge and skills they have gained throughout that specific term. A good and an eminent leader remains calm and fair during the discussions; they calculate the effects and the merits of each task they appoint to a student. This role of the principal makes them sit in the driving seat. They take full responsibility for leading a class of 30-40 students and require incredible organization and time-management skills along with the ability and strength to cultivate other's toughness. By setting up a right direction and charting an easy to understand and interpret course along with setting up high-level expectations and using data to trace the progress and the performance, instructional leaders can help students to learn in a better way. The teachers should be provided with necessary training programs that includes seminars on how to teach students, and they should be equipped with latest technological pedagogies to teach students and not to force them to succeed. Instructional leadership is not a stir and serve recipe; it takes hard work on both sides to inculcate decision-making power. Instructional leadership encourages improving the classroom practices of teachers. A practical example could be of a teacher who directly engages with the students and encourages team-based learning, which improves problem-solving skills, managing and driving visions along with public dealing. The position of an instructional leader requires a jack-of-all-trades and masters of none (Purvanova, & Bono, 2009).

Leading for Learning and Teaching

Researchers chose to make the special issue all about the connection between better teaching and better college leadership on purpose. There hasn't been a lot of research on how to improve teaching or how to run colleges better. More experts in educational administration think that the main job of college administrators should be to improve teaching and learning (Purvanova, & Bono, 2009). Changes in education policy over the past few decades that have tried to make big changes in how students are taught, are also likely to make classroom teaching and student learning a big focus of research on educational leadership.

Stein and Nelson say that one important problem is that research on educational leadership needs to look at more than just teaching in general; it needs to look at specific college subjects. Not only do teachers teach, but they also teach reading, writing, and maths. The manner they do their jobs depends on what they are teaching. As you might assume, the topic of the class affects who teaches it. This is something that researchers need to bear in mind when studying educational leadership (Burch & Spillane, 2003; Spillane, Diamond, & Jita, 2003). Stein and Nelson show that studies of leadership expertise need to be

relevant to the subject matter since it's not enough for administrators to use what they know about teaching one subject to teach another subject. There is one way to study leadership issue knowledge that comes to mind. It might also be possible to analyse other areas of educational leadership in ways that are sensitive to the subject matter, like how colleges and college districts divide up leadership roles by issue area (Khan, & Khan, 2022).

Stolze argued in 2018 that things like power, ideas, skills, vision, and flexibility might change how individuals act (Nikezić, S., & Nikezić, S., 2021). Dugan and other researchers (2020) believe that current definitions indicate how a mix of personal attributes and short-term work can affect people (Cross, D., & Swart, J., 2022). A leader comes up with a vision and then tells others about it so they can help make it happen. A good leader will take people where they need to go, even if they don't want to go there. That's the most vital thing a good leader should have. Being a leader is just influencing other people. Leadership is not a person or a job. There is a multifaceted moral relationship between people that is built on shared moral principles, trust, obligation, dedication, and feelings. What individuals do is what leadership is all about. Putting a group's energies towards a common purpose. Getting a group of people to do what you want is what leadership is all about. It is a success in accomplishing goals.
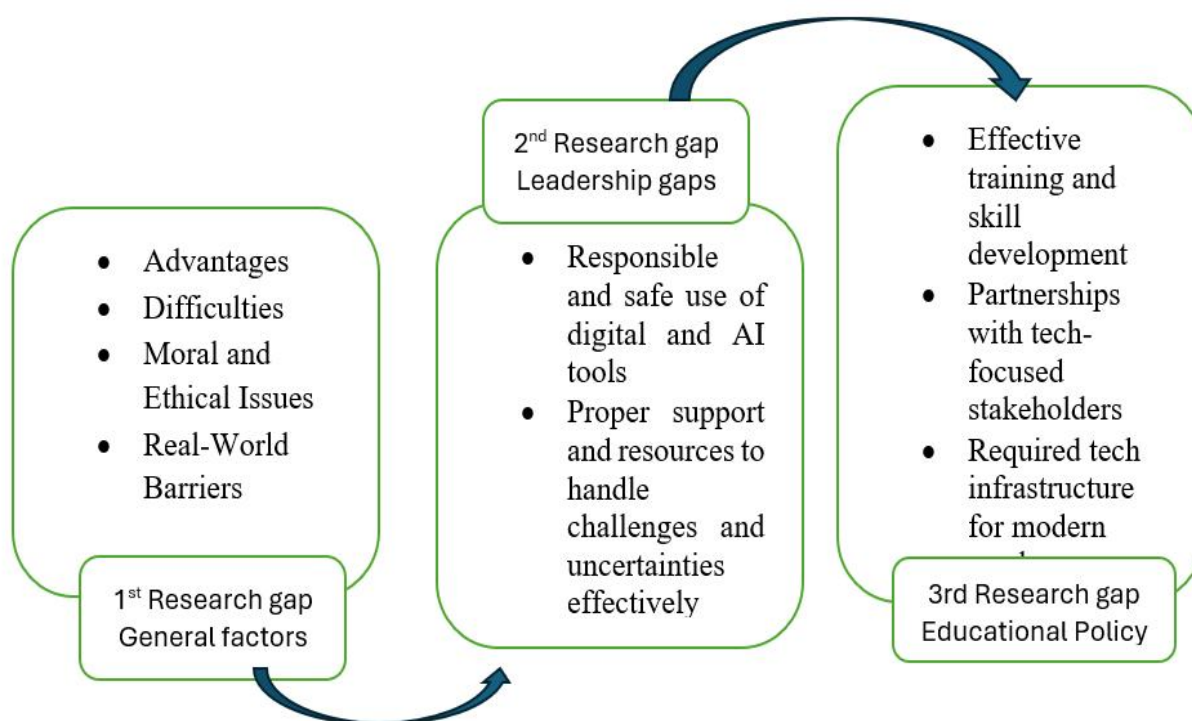
Research gap on college leaders' digitalization

A lot of people have worked out to become leaders, and the same is true for the traits and ways of leading. It's also crucial to know what these types and qualities are. How does their way of doing things show this? What do these things look like in their job, and what effect does their plan have? But modern education's focus on students' personalities and methods of thinking goes against the collective ideas of conventional education (Jin et al., 2016). This fight has to do with old ways of doing things. According to Roman et. al. (2018), traditional culture gives us various beliefs about how to learn new things and what students are like in college and in the community. Hallinger and Murphy (1985) used surveys and the results of this literature to find three aspects of instructional leadership: (1) setting the objective of the institution, (2) managing the instructional program, and (3) fostering a conducive learning environment.

Statement of the Problem

Having good leadership skills is important for the students' development. These skills have a big effect on the environment, businesses, politics, the community, and the country. In everyday life, we've noticed that many young, smart, and well-educated students don't have the leadership abilities to lead others (Faisal, et. al., 2023). In real life, no one wants to be led by someone who is young and inexperienced. Age doesn't matter; the real problem is that the younger generation isn't getting enough knowledge. It's hard to trust them because they don't have much experience. Student leadership can help fix the problem. Colleges are places where people can learn more and do research, teach, and study. This study helps to provide useful and vital information about student leadership. It helps colleges create strong future leaders by giving them leadership training (Higher Education Commission, 2022). This paper fills in a gap in the literature and helps make the academic debate clearer and more aligned by giving a thorough look at the contributions of studies on leadership and digitalisation. In this process, the attention has shifted to how important college leaders are for leading digitalisation

Objectives

1. To evaluate the extent of institutional commitment to transformation in Pakistani colleges.
2. To investigate how college leaders in Pakistan comprehend digitalization and identify the digital skills required to lead in the digital age.
3. To analyze the prevailing orientation of Pakistani colleges; whether research-driven or teaching-focused and its implications for institutional development.
4.   To identify the key challenges facing academic institutions in Pakistan and explore potential future directions for achieving balanced and sustainable growth.

Research Questions

1. To what extent are colleges dedicated to change? Who will lead higher education in a trans-formative way?
2. Whose abilities will be crucial to the college fulfilling its goal?
3. Which are the trends in the growth of Pakistan colleges: research or teaching-oriented?
4. How can academic institutions steer clear of extremes and strike a fair middle ground?

METHODOLOGIES
Method and Tool

This study also used a qualitative method to investigate what happens in real life. There were four colleges chosen and the data collected from a variety of sources, such as reviews, surveys, and semi-structured interviews. The researcher used a 5-point Likert scale to find out how students and teachers felt about things. Stratified random sample was the form of random sampling utilised in the investigation. The targeted sampling was used to gather data that could be measured. There were 5 teachers and 5 students from each college that filled out the study's survey. We spoke with students, teachers, and college leaders. We also talked about the interview questions with a peer expert in educational technology to make sure they were relevant and correct.

Table 1 shows some of the questions that were asked during the interview, which covered both digital and AI technology.
Interview protocol sample questions

Digital Aspects	AI Aspects

Do you think that the existing college system has enough resources to help leaders make the switch to digital?	Do you think that the developments that have happened in the world of digital modernisation (such tools like ChatGPT) will have a good or bad effect on what you do? Can you give some examples?
Do you think that colleges have had the right training in digital education so far to use it well in their leadership?	Can college leaders use tools like ChatGPT to help them with their daily work as leaders and administrators?
How often do you take part in required or voluntary digital skills leadership training? Do you think this training will help, hurt, or not change a leader's work?	If so, how would you use such a tool yourself?
	As a leader, do you have any worries or problems that could come up while using AI and tools like ChatGPT?

Collection of Data and Samples for Research

The study includes all the college leaders from across Punjab province of Pakistan. An email invitation to all college organisations based on lists from the Ministry of Education for the 2024–2025 college year. So, 10 college leaders answered from all over Punjab, which is around 17.59% of all college organisations. College groups chose the times and places for the interviews. Participants were told about their rights, such as the fact that they may choose to take part in the study, that their answers would be kept private, and that they could leave the study at any time. Before the interviews, this information was given out on an information sheet and a consent form.

Qualitative Coding and Data Analysis

A content analysis of the qualitative data was done to look at the pros and cons of college leaders' integration perspective in the digital and AI environment. Prince (2017) stated that three-step content analysis methods were employed to transcribe and analyse the recorded interviews. The first phase, open coding (1), was to take notes and make headings right in the text while reading and rereading it, with the goal of finding both the problems and the chances. The second step (2) was to make categories by putting the notes and headers from the margins onto coding sheets. This led to the creation of categories. There were additional quotes to back up these groups. Lastly, the third stage (3) gave a general overview of the topic and showed the final selection of categories that fit with the study's key goals.

Quantitative Study

The people this survey was aimed at were faculty and administrative staff from the Faculty of Social Sciences at the college. We chose this group of people because they are directly involved in leadership practices and have the power to change society through higher education. The study included 150 people who answered questions. It was thought that this sample size was big enough to make sure that the results were statistically reliable and representative of the whole population. The Stratified random sampling was employed to make sure that the sample included people with a wide range of demographic and professional traits, such as gender, academic rank, and administrative jobs. Based on these traits, the population was split into strata, and people were randomly chosen from each stratum. A structured questionnaire was used to gather information about people's views on transformative leadership practices and how they affect social development. The questionnaire had five parts. There were Likert scale items that went from 1 (Strongly Disagree) to 5 (Strongly Agree). The scale items were divided into sections based on the study's goals, such as the role of educational leadership in social development, common

leadership practices in colleges and universities and the link between good leadership and good outcomes for society.

Quantitative Data Analysis

Statistics that describe Mean and standard deviation: These were used to summarise the central tendency and variability of the responses. The mean scores showed what people thought overall, and the standard deviation showed how much agreement or disagreement there was in their answers. Inferential Statistics ANOVA (Analysis of Variance): This was used to find out if there were big disparities in how people thought about things based on their gender, academic status, and job duties. ANOVA helped find patterns and differences in the data, which gave us a better idea of what affects leadership practices and how they affect people.

Descriptive Statistics for the Leadership Practices at the College

	Mean	Standard Deviation
Transformative Leadership	4.21	0.61

The table shows the descriptive statistics for Transformative Leadership, such as the mean (M) and standard deviation (SD). The average score (M=4.21) shows that most people who answered the survey think that the Faculty of Social Sciences at the college's leadership practices are very in line with the ideals of transformative leadership. A mean above 4.0 on a five-point Likert scale means that academics and administrative staff agree or strongly agree that their institutions' leadership shows transformative traits including vision, teamwork, and creativity. The standard deviation (SD=0.65) shows how much the answers vary. A low SD means that most of the answers were close to the mean, which suggests that respondents had similar views on what transformative leadership entails. In general, the results show that the college's leadership practices show strong signs of transformative leadership, which could have a good effect on the efficacy of the institution and the growth of society. But further research is needed to find out how these views change among different groups of people or professionals.

ANOVA for Leadership Effectiveness

	df	F-Value	P-Value
Between Classes	3	5.47	< .01
Within Classes	146		

The table above shows the results of a one-way ANOVA test that looks at whether people in different employment roles at the college's Faculty of Social Sciences have very different ideas about how effective leaders are. F-Value (5.47): This number shows the difference in variance between groups and within groups. An F-value of 5.47 means that there is a statistically significant variation in how people in different job roles see how effective a leader is. p-Value (<0.01): The p-value is less than 0.01, which means that the variations in leadership effectiveness ratings between job roles are statistically significant at the 1% level. This suggests that the differences in how people see things are probably not random. Degrees of Freedom (df): Between Groups(df=3): This is the number of employment role categories minus one. Within Groups (df=146): This is the total number of people that answered the survey minus the number of employment function categories.

Regression Analysis for Leadership Effectiveness

	R^2	F-Value	P-Value
Leadership Practices	.48	45.23	< .001

Quantitative Interpretation

The table shows the findings of a regression study that looked at how leadership techniques affect the growth of society. This is how to read the most important statistical indicators: R^2 (0.48): The coefficient of determination (R^2= 0.48) shows that leadership practices may explain 48% of the differences in societal development. This means that leadership methods have a big impact on how society turns out, which means that there is a reasonably strong link between the two. F-Value: 45.23 The F-statistic shows how important the regression model is as a whole. A high F-value of 45.23 means that the model fits well and that leadership behaviours are a solid way to anticipate how society will change. p-Value (<0.001): The p-value is less than 0.001, which means that the results are very statistically significant. This proves that leadership practices have a powerful and predictable effect on the growth of society, and the connection is not just a coincidence.

Digital Tools and Organisations: How Technology Makes It Easier to Optimise Complex Educational Institutions

Most articles that look at organisations from a macro viewpoint talk about how they are changing, but they don't give enough weight to how digital transformation affects organisations' work. Weiner et al. (2015), on the other hand, stated that how the fit between strategic planning and information technology (IT) is important for meeting operational goals, especially in institutions that are hard to run, like hospitals. Their empirical analysis demonstrates that digital tools might be very helpful in planning and keeping an eye on internal operations (Makhdum, et.al., 2023). For example, by using advanced digital tools to make better use of data, administrators were able to improve decision-making and service quality by making better use of traditional management tools like key performance indicators and storing important data (Khan, & Khan, 2022). This study gives real-world proof of the necessity to use digital technologies to improve internal procedures and make sure customers get good service and to help them handle complicated problems with staffing and operational costs. In the same way as the study mentioned above, data were utilised to redesign the whole organisation to make the most use of both facilities and procedures (Prince, 2017).

It is the job of leaders to make sure that the technical tools being used or put into place are appropriate for the purposes and goals of the organisation. Researchers agree that digital technologies can make organisational processes more efficient (Khan, & Khan, 2022). However, we believe that they need to be internalised and integrated into employees' daily tasks for organizations to get the most out of them and reduce the number of people who leave when they are adopted.

Findings of Qualitative Study

Most college leaders have realised that technology is changing and that they need to use it in their everyday leadership activities. In fact, based on what they learnt during the epidemic and how they used different tools, they think it's important to know, learn, and use digital tools well. The code responses for the **qualitative research**, using T1 to T5 for the five teachers and S1 to S5 for the five students mentioned:

Coded Findings with Teacher Codes
One important result is that college administrators now use digital technologies to talk to people inside and outside of the college. **T1**: *"I now use technology by using our college's website."* I didn't use it much before, but now I see it as a great way for parents, students, and the community to remain up to date on what we're doing at college. Also, college leaders and instructors talk to each other a lot

using digital technologies; for the full college, it has become a main way for everyone to talk about college and administrative issues. **T2**: College leaders reported this as a major shift in communication practices. For teachers, LMSs are used to communicate information on communication and management every now and then. **T3**: Shared that LMS platforms are used periodically for internal communication and management.Another important result is that college leaders now help their teachers use digital technologies to post materials and share information. **T3**: Highlighted the growing role of leaders in supporting digital skills for teaching staff. Digital platforms like Dropbox, Google Drive, and Cloud are being used more to make it easier for college administrators and instructors to work together.

T4: *"People know how to use other services, including Google Drive, Dropbox, and even the Cloud. They help us share things without having to print them out, so everyone can get to them right away."* College administrators have also relied more on digital technologies like MS Teams to do their jobs and talk to different groups of people, like parents. **T5**: *"We have been using MS Teams since the pandemic, and it has been very helpful."* It makes it easier for teachers to talk to each other about college work and for parents to talk to each other about college programs.**T5** (continued): *"I utilise it for more than just administrative tasks; I also use it to keep parents up to date."*Another noteworthy thing about how colleges use technology is that most college administrators use the college's website a lot. They add new materials and information about different events on a regular basis to keep the college community up to date.

T1 (again): *"I keep the website up to date and check its content all the time."* I also use it to talk to regional offices and other people who are important to the college.The results showed that one of the biggest problems for college administrators in Pakistan is getting people to use technology more. **T2** (again): Reported that encouraging technology usage among staff remains a challenge. One of the biggest problems that has been found I I it that there isn't enough infrastructure to accommodate this change.**T3** (again): *"The college needs maintenance."*Some college leaders said that college groups encourage the use of digital tools, while many others said they were worried that getting the right amount of equipment for both everyday tasks and classroom instruction is still a long way off. **T4** and **T5**: Acknowledged the gap in technological resources and infrastructure. We need to fix our computers, and our logistical infrastructure isn't working right here.

Student Voices on Technology Use

- S1: *"Our teachers now upload notes on Google Drive, which saves us time and makes it easier to revise at home."*
- S2: *"Earlier, we had to ask teachers for everything face-to-face. Now, they just post it on our class group or Google Classroom."*
- S3: *"Sometimes the internet doesn't work at college, so I can't download the materials when I need them."*
- S4: *"We had a session where our teacher explained how to use Dropbox and Google Drive, and now it's easier to submit assignments."*
- S5: *"MS Teams helped us during COVID, and we still use it for online meetings or announcements even now."*

Results of the Quantitative Study

The mean score (M=4.21, SD=0.65) for transformational leadership shows that the way leaders act in colleges and universities is quite similar to the principles of transformative leadership. ii. This means that educational leaders stress vision, teamwork, and new ideas, which are all important for the growth of both

institutions and society. There are big differences in how people in different job roles see leadership effectiveness. The ANOVA results (F=5.47, p<0.01) show that there is a statistically significant variation in how people in different job roles see how effective leaders are. ii. Faculty members tend to give leadership initiatives higher ratings than administrative personnel do. This could be because faculty members are more involved in leadership projects or because they have different expectations.

Pros and Cons of Using AI in College Leadership

Most college leaders at both levels were excited about how new technologies, such AI tools (like ChatGPT), would help them lead better and were eager to adopt these improvements. So, even though they don't know much about AI technologies, they all agree that learning about them would be very useful and important for their leadership practice. The following quotes are typical:

> *'Yes, it would be helpful; I would look at it. Learning new things all the time and technology getting better are two things that go hand in hand'. 'I can learn a lot from this tool on how to use it for my own everyday leadership tasks. But I don't know how to do this'.*

They really stress how important it is to keep learning since they think that new technologies should match the changing role of college leaders. A lot of college administrators also think that these tools might make their administrative work a lot easier and faster by making chores more automatic. AI technology could improve their leadership responsibilities and make them more helpful and adaptable.

These quotes show what we found:

> *'We do, however, need to set up a clear structure for how students will use these technologies. We should be watchful'.*

DISCUSSION

The findings from document analysis that are qualitative, public colleges put a lot of effort into making student leaders by using peer mentoring, community-focused programs, training in communication skills, and community service projects. Good communication, community service activities, and volunteering by older students are all good ways to get people involved at college. Public colleges encourage people to get involved, set long-term goals, and work with national educational programs. By running their business well, putting community involvement first, and providing the best possible instruction, they hope to make their services more accessible and increase their reputation. Private colleges are different from their competitors because of their own vision and mission. They make sure that professional practices are always the same, put a lot of emphasis on student success and happiness, stimulate continual growth, and keep stakeholders interested.

These helps build a good reputation, draw in stakeholders, and encourage growth, new ideas, and making a difference in the world (Higher Education Commission, 2022). Innovative and learning leadership will be the best way to help the college flourish. The learning leader is creative and innovative. People want it the most these days. The situation in which effective and strong leadership will take place is very important. Leadership has changed as our social and technical contexts have changed. To deal with problems and need to learn how to be a leader. It is needed to provide our leaders the skills, knowledge, and abilities they need to deal with such problems. As our institutions grow, it is the job of our leaders to help change society and the culture of their organizations. A leader's influence can't be overlooked because they are the ones who make the colleges and university more productive and innovative, which is

important for its growth. The 21st century has seen a digital and technical change; thus, the university's executives will need to have more skills and expertise (Makhdum, & Khanam, 2021). A lot of high-tech knowledge is needed to do things accurately. The learning leader would be able to make the institution a better place to work by bringing about change, new ideas, and creativity. A learning leader would know a lot and be able to make changes happen (Begum, & Faisal, 2025). He would know about the problems that come with new technologies. The learning leader would also work to create an atmosphere and culture that encourages creativity and new ideas.

The learning leader will need to have technical abilities to make changes in the learning environment of a growing university. The lifelong learner will always be ready to help the university grow. A learning leader never stops learning and evolves with the times to take advantage of new opportunities. The greatest way to deal with the problems and differences at colleges is to be creative and come up with new ideas. The team will be resourceful, creative, and imaginative with the learning leader (Begum, & Faisal, 2025). The leader will make others feel good about working together to reach common goals. Technology has changed education in huge ways, and only the learning leader can make big, important changes at the university level. There are many things that weren't there before, but they are now. People surrounding are also very well-informed and are open to new things because of digital progress (Begum, & Faisal, 2025). Only the learning leader can handle the new problems and stress that come with the world and politics. To meet the difficulties, leadership needs to be expanded. She must learn how to be a leader because she will be looking at different ways to teach new ideas to students. She must be able to do a learning process that makes sense and is rational. An emotional intelligence is even more vital, and learning will help you get better at it. She will comprehend how changes in society are affecting education, how technology is speeding up, and how patterns are changing. In conclusion, the learning leader is the best and most qualified individual to help the university thrive.

Technology has Transformed Leadership Roles in Colleges

Old ways have been replaced by new. Technology leads to creativity and innovations. It has made old things obsolete as it is affecting every field of life. Education is no exception. It is changing the teaching and learning strategies. Modern teaching methods demand modern use of technology. Teachers are expected to have know-how of the latest technology by incorporating technology in the classrooms and they are using it in universities (Makhdum et al, 2023).

Few people think it is an added burden and so they show resistance in adapting it. Teachers also think that they have relevant expertise in using it but now seeing its importance the teacher must adapt it they have to remain in the field. Leadership practice has evolved over time. Effective leadership depends on the context within which it is going to be executed. Due to the evolution of our social, technological and professional environment, leadership has evolved too. Education is the key to realize the challenge to instill in leaders of the 21st century those abilities, knowledge and skills that will lead them to cope with these upcoming challenges. It is the role of our universities that our leaders contribute to societal transformation and organizational culture (Malik, & Janjua, 2021). Leaders influenced cannot be ignored as they drive innovation and productivity. Modern technology is reshaping societies and even the way we work. This 21st century has brought digital and technological revolution and so leadership demands higher-level skills and knowledge (Khan, & Khan, 2022). The need for learning leadership is growing day in and day out. There are hurdles for today's leader to become a learned and innovative leader. Today's leadership is so critical and pertinent in many situations (Higher Education Commission, 2022). 21st century demands a great deal of high-tech knowledge to accomplish tasks with accuracy. Leader encompasses many characteristics but a 21st century leader also calls for outstanding competencies and strong insight into powerful technological tools. Today's leader must bring incorporate change and

innovation. In universities leaders may face big challenges and so leaders must be more well-informed and well-equipped than before. These leaders will have to be learning leaders. He or she should be well informed about all types of challenges. Also, her or his focus is on encouraging environment of innovative culture and change. At this level leader should have curiosity, resilience, flexibility, persistence and be dutiful. Most leaders should be life-long learners and improve constantly. Always sharing knowledge and connecting with the world via social media and the internet, adapting changes to avail opportunities, encouraging publishing research, creativity and innovation are the best ways to manage complexities and diversities of the world. With these leaders will be able to make team resourceful, creative and innovative. They should all be reviewing their teaching practice and update their ongoing practice that how new ideas can be taught to students. Therefore, it can be stated that technology is driving unprecedented changes.

Change Process

The change is the transformation in the organizational structure, its processes, tasks, or its present practices. Only the change agent can facilitate the change, and he will be successful only and only if he or she collaborates with other members, that is how all members are tied together in all tasks. How he or she makes strategies to organize the tasks implements to bring change in education. Time and skilled leadership are needed. The leader who leads, experienced and answerable is the right person to bring change. Change is a phenomenon, for a change "denial" is the first stage to face, as it is always difficult to accept a change (Faisal, et. al., 2023). Education is the key to accepting a change and to realize a vision set out by leaders. Education is a key to realize the vision set out by leaders with education. A change in a system has a life of their own and is difficult to change. Change is not always easy, as it needs many approvals. There could be many other factors involved such as cost. Institutionalization is the process by which the norms and the beliefs of society are embedded in society, and it takes place with the help of institutions. Adaptation is the change in the process of teaching and assignments and the students must fit in these adaptations to learn the new ways and methodologies. It emphasizes the roots of organizational failure and accomplishment. Expected learning outcomes are the outcomes that are predictable and regular with the curriculum. The six components of the change process include:

Purpose and Direction

Colleges and children's center leaders are committed to raising the bar and standard to serve the needs and desires of students. They develop a vision; effective leaders articulate a clear purpose and direction.

Core Business Teaching and Learning

This includes the teaching and learning task; the important practices that focus on the development of students are centered on the core work of teaching and learning. These include assessment practices, teaching learning projects and activities. The resources required should also be provided.

Developing others

For organization to move forward, leaders must engage in developing others. Collaborative and distributed leadership are needed and are essential for success. It is based on practical findings through which the capabilities of others are developed, through coaching, mentoring and providing feedback (Faisal, et. al., 2023).

Improving the Organization

It includes communication, the behavior and climate of the students and the leadership structures. Leaders participate and help others on how to make changes as in where the subordinates needed support. It includes the whole atmosphere of teaching and learning such as human and material resources, infrastructure. Leaders must access teaching and learning and take part in reflection, enhance teacher quality and improve college and community.

Facing outward

It includes wider leadership inculcation. It includes learning networks, federation-based systems and system wide leadership. It is the most significant leadership development witnessed in the past 5 to 6 years.

Professional Learning

Effective leaders are considered as the learners. They are aware of all the solutions of problems and answer all questions in advance. They are well informed and learn, listen to followers. They are also considerate problem solvers as they encounter challenges (Faisal, et. al., 2023). They are aware of what takes them to become a professional, so they are always confident learners as they learn from experience. The core purpose is to improve teaching and learning then developing others and improving the organization and facing outwards.

CHALLENGES

Transformational leadership is a humane leadership theory, which believes in inspiring followers to do great work through positive motivation. The concept of innovation and creativity have become vital in an educational context specifically to gain competitive advantage but the developing countries like Pakistan are facing institutional instability, lack of infrastructure, expertise. Under these conditions, the role of a transformational leader becomes difficult. The reason being that this style cannot be understood and applied unless one gets through it by himself/herself (Hussain, 2020). In the context of Pakistani culture, it represents a strong uncertain culture. As our institutional culture in Pakistan promotes rote learning, lack of resources so this alone leadership is difficult to be applied. The dynamics in developing regions are quite different from developing countries. If institutional environment promotes creativity and innovation propensity then colleges, colleges and universities of Pakistan may be encouraged leadership of this kind. Transformational leadership requires an effective case to be made for change (Hussain, 2020). Such leaders must show the workers that the one son high level are unsustainable and there is a need for a systematic change to thrive (Faisal, et. al., 2023). Secondly, leaders need to inspire the workers by providing them with a compelling vision and hope for the future through which everyone can benefit in the organization. The third challenges being that the transformational leaders need to motivate and empower workers during rough and tough times. There is a dire need for the transformational leaders to make the changes permanent. They need to convince the other workers and will have to ensure a special task force that would ensure progress. This theory is difficult to teach and trained, as it is a combination of several leadership theories.

Transactional leadership is a managerial approach (Hussain, 2020). It is a style of leadership in which leaders make their followers through reward and punishment. It works through organizational culture and the leadership is responsive. It is an insufficient style of leadership, and its challenges include that it requires specific rules and regulations to be followed and if not, then there are punishments. It requires

that individuals need to be self-motivated all the time and there is no space to lag behind or break the rules. Creative mindset cannot be applied here as creativity means freedom to do whatever you want. Violating and refusing policies and instructions can have consequences that might lead to termination from job. There is no flexibility, thus significantly limiting the amount of innovation. Transactional leaders are harsh and rigid. Leaders and employees are underdeveloped. The leader becomes a bottleneck, as there is no learning in this. It forms followers and not leaders. The team members are just the followers, and they do something productively only when instructed to do so. It mainly focuses on the consequences and failures and the members of the team who are assigned the task are blamed. Due to the implementation of transactional leadership, the morale level is also very low as the leaders are working under assigned rules and regulations that cannot be changed. Under this leadership if the subordinates cannot complete the assigned tasks, then they are held for lack of productivity and their productivity is shunned. Therefore, they are considered incompetent. This leads to poor and weak leadership development and hence there is no long-term vision and focus on managing relationships.

CONCLUSION

Digital transformation is something that any institution, big or little, must do these days. Every day, leaders deal with new technologies and make decisions based on the information they have. Because of this, we strongly urge more study to be done to learn more about how digital transformation affects leadership at both the organizational and individual levels. The question of how human and machines relate to each other is not new (Turing, 1950), and neither is the question of how digital transformation affects leadership. However, the relationship between digital transformation and leadership needs to be looked at with new eyes. This systematic review gives a structured overview of a promising field, and we believe it will help future research make sense of their work to get new and useful information on this issue.

RECOMMENDATION

Researchers agree that the introduction and usage of digital tools is closely tied to organisational cultures that technology. This shows the readiness of organizations are to successfully use digital technologies. Furthermore, research has to be done to find out how much culture affects the choice and successful use of digital technology in education. Answering this question also gives useful information about how digital technology changes the identity of an organization and sets new limits for it. Using both theoretical and empirical methods to investigate this question could help us understand how to create new organizational identities and how they relate to different kinds of organizations and institutions. As digitalisation makes it easier for people to share information, the lines between organizations are becoming less clear and are even moving outside of the formal organization (Hussain, 2020). Notably, distributed or shared leadership is predicted to acquire momentum, especially if it is regarded a better fit to the features of virtual teams, such as the informal nature of its communication channels, task interdependence and team member autonomy (Avolio et al., 2014; Hoch and Kozlowski, 2014). It's still not apparent what leaders should do to recognize and promote distributed leadership in teams.
Also, how much does the culture of the organization affect how well shared leadership approaches work? How does shared leadership change the way virtual teams work? We say that these are questions that need to be looked at more in the future.

PRACTICAL IMPLICATIONS

It looks that the job of the college leader has gotten harder because of digitalisation. How to give college leaders the time, money, and training they need to help teachers and students learn through digitalisation.

The results support the premise that all members of the educational environment can work together across layers and clusters to achieve generative leadership. The main findings demonstrate that leaders are very important in creating a digital culture. They need to build relationships with a lot of different stakeholders and make sure that people can work together in difficult situations while also dealing with important ethical issues. With this study, we help move the conversation about digital transformation and leadership forward by providing a thorough and organized evaluation and pointing out important areas for future research that will help us learn more about this topic.

Originality and value

This paper adds to the field of digitalisation and college leadership. College administrators who want to use technology more in classrooms will find the research useful. This also has to do with putting digitalisation at the top of the list of vital things that colleges as institutions should do. This study adds something new to the field by focussing on how digital technologies may be used together, and it also looks at how AI is viewed in college leadership in Pakistan, which is an area that hasn't been studied much.

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