The role of the principal in promoting technology integration into the pedagogical practices

Lubna Malik, 2015

About the author

Lubna Bashir Malik has been involved with education from many years in different capacities with various educational organizations. Currently, she is working as an Educational Technology Trainer with a large private school system in Pakistan. She is Head of the ICTech (Innovation across curriculum through technology) Department. She designs the ICT curriculum for elementary and middle schools including different types of short and long ranged projects. She trains the teachers to use technology effectively across multiple disciplines. She works with the teachers for their professional development through facilitation sessions, workshops, observations and follow-up sessions. She has been working with the teachers on online assessments as an effective and valid mode of assessment. She creates connections across the schools around the globe so the students get prepared with the wider world exposure and get accustomed to working and interacting with people from different cultures, races and religions.

Introduction

Using technology is a buzz phrase of the 21st century all over the world. In Pakistan, this trend has emerged in renowned private school systems. This study was conducted in the private school systems, specifically primary schools, selected from Lahore, Pakistan. The study mainly examines principals' and teachers' understanding of technology integration, the role of the principals in promoting pedagogical practices as a result of technology integration and the strategies adopted by the principals to develop such a culture. A mixed methods approach is used and the data is collected from principals and teachers through interviews and surveys. Classroom observations are conducted to gauge teachers' understanding of technology integration. Students work on computers helped to assess the level of students' understanding.

The Principals' role was broadly considered in three categories: role model, instructional leader and visionary. School principals have an influential role and a strong impact on the use of technology. However, they do not have concrete concepts of how technology integration can enhance teaching and learning. They are more inclined towards managerial tasks which may prevent them from acting as an effective instructional leader. They are often unable to model the role of a technology leader because their concept of technology integration, i.e. the relationship between pedagogy and technology, is not fully developed. Principals may rather view computers only as technology and so more focus is given to learn about computers. The students learn the use of technology and show good understanding of how to use technology.

This approach trickles down to most teachers but they too lack an understanding of how to integrate technology effectively in their pedagogical practices. They are far away from creating meaningful learning environment for the students. Therefore, the vision of a principal for technology integration needs to be to develop a culture where technology assists pedagogical practices in terms of meaningful learning as well as the development 21st century skills. The study signifies the importance of the principals' role in the relation to pedagogical use of technology.

Research Questions

To conduct my research about the role of principals in the private primary schools to integrate technology to promote pedagogical practices, I devised the following questions.

1) How much are principals and teachers aware of the concept of technology integration?
2) What are the attitudes of school principals to promote technology integration?
3) What is the role of technology integration in pedagogical practices?

Purpose of study

The purpose of study was to explore the role of principals in promoting technology integration into pedagogical practices. There have been limited studies on the role of the principal and the implementation of ICT in schools. Similarly, there are not many studies conducted on school principals as technology leaders in the local context. Furthermore, my

experience as working with educational technology has led me to look at the leadership role in depth. In my teaching experience, while working as an ambassador for technology integration across the curriculum; there were lots of unanswered questions. I intended to find those answers with the perspective of a researcher.

Research Methodology

The research entails both quantitative and qualitative approaches which includes interviews and surveys. Survey responses were measured using Likert Scales. The data collecting tools were devised on the basis of the literature by Hope and Stakenas (1999) who suggest three primary roles for principals relative to computer technology use in schools: role model, instructional leader, and visionary. The nature of interviewing mode explicitly highlighted principals' stance on the pedagogical use of technology. Triangulation was achieved by interviewing teachers using the same questions. Teachers responded and shared their views based on their experiences. Principals working in a leading position and may be as a top authority personnel of the school manoeuvred a little while answering the questions whereas teachers pin pointed the issues and talked about the current pedagogical situation for the use of technology in the school.

Ten private primary schools were selected from Lahore to conduct the research about the role of the principals for technology integration. All these school systems have more than one branch in Lahore and have been established since more than ten years.

There were ten school systems selected among the schools in Lahore. These schools systems had more than one campus in Lahore and holding more than 500 students in each campus. The schools principals were selected from the primary section of the schools. The teachers belonged to the same schools. According to schools policy the structure of technology integration is same for all teachers and all class levels, there is no difference in criteria setting, however, few principals preferred to call teachers from Class 4 and 5.

The schools claim to use technology as a teaching and learning tool. It is attractive to the parents who consider the school to be equipped with latest technology for their children.

The rationale for the selection of teachers was shared with the principals. Teachers who used technology to enhance teaching and learning were selected to participate in the research. In the first phase of data collection, principals and teachers were given the survey to complete. In the second phase of data collection, principals and the same teachers were interviewed.

I observed one technology integrated lesson in each school to see the actual ICT scenario and relate it to what had been said by the principals and the teachers. This phase was conducted after the interviews and the surveys. I also checked the following documentation to get a clearer picture of the technology integration in the pedagogical practices.

- students' work saved in the computer
- computer lab timetable
- teachers' lesson plans
- students' assessment sheets

Interview Questions

The following were the questions structured for the principals and teachers interviews under the main themes.

Role model

1. What is your role to promote technology in the classroom practice?
2. What is your specific future plan to bring technology based learning in the classroom practice?
3. How do you, as a principal, facilitate and support the concept of technology integration?

Instructional leadership

4. What are the challenges you face to develop technology culture in your school?
5. What are the barriers you come across for effective use of technology in the classroom practice?

6. How do you think technology integration facilitate teaching and enhance learning?

7. What kind of support do you provide to the teachers in this regard?

Visionary

8. What do you understand by technology integration?

9. Why should we have technology integration?

10. How do you use technology in your school?

11. Is there any opportunity for you to grow as a technology person?

Analysis of results

After conducting the interviews from the school principals and teachers, the table below shows the major themes emerged from their responses.

Major themes	Theme emerged from the interview/survey responses
Role model	Role model Facilitator Motivator Positive Attitude
Instructional leader	Professional Development Pedagogical Practices Students' Achievements
Visionary	Concept of Technology Integration School improvement plan New Initiative

Role Model

Principals of the schools claimed that they are the role model for their teachers to use technology to promote teaching and learning. Describing the nature of being role model

during the interviews; many of them thought that they provided all kind of support to the teachers in technology integration where 'support' means that they facilitate them in providing digital and non-digital resources, human resources and technical support. They claimed that this makes them a role model for their staff, e.g. that they use email for official purposes or that they used multimedia presentation and videos for professional courses. However, none of them had attended any kind of professional training in terms of ICT nor had they made any personal efforts to participate in any ICT related course/workshop.

These school principals did not emphasize on the importance of using technology in the pedagogical practices and their role in modelling a culture of technology use was very weak, e.g. teachers hardly received any mail from their principals and they only rarely experienced any training for technology integration by the principals.

The principals take assistance from the lab assistants for their computer related tasks. However, they are able to access their mails comfortably. Replying to the question of how they use technology in the schools, one principal replied; I use technology as I read my mails and reply my mails. I also take my all printouts myself and provide full support to my teachers in terms of providing resources. The IT teacher is always there to provide them with the technical support.

The teachers answered with two entirely different perceptions. The experienced teachers were almost with the same vision of their principal and accepted the role of the principal as it is. They were happy for all the efforts being made by their principal in terms of promoting technology in the school. They said their principal is leading us as a role model, doing everything to make our school as a technology based school. Our principal provides us all the resources mentioned in the curriculum and keeps a check on us. On the other hand, the teachers belonging to today's era had a strong concern for the existing communication gap between teachers' needs and principals' understanding. One of the teachers said;

> *"Our principal is very supportive towards technology integration, but as she does not have much understanding of the concept so she does not know our demands for the resources. On the other hand, she is unable to provide any guidance to use technology in the classroom practice. She has not learnt about educational technologies so how can she train us."*

The responses from the school principals revealed that they considered themselves as facilitators to support the concept of technology integration in pedagogical practices. It was clear from the interviews that all principals try to facilitate teachers to use technology for teaching and learning according to their sources. They do not have sufficient resources; almost all the principals stated the similar response. One of the principals said;

> *"I observe my teachers and provide them with effective feedback; I discuss their ICT lesson plans with them, I talk to the students and see their work; thus, give feedback to the teachers on students' work. This is how I facilitate my teachers. I cannot go beyond my budget to facilitate them with resources."*

While interviewing teachers for the support provided by the principals in terms of resources; a majority of the teachers agreed that principals try to provide a good infrastructure according to the set policy. However, budgetary issues caused a hindrance. They knew that resources come from the head office or school top management where principals are not the authority to cut down the budget. Moreover, teachers wanted their principals acting as a facilitator for them where principals facilitate them in each and every aspect of pedagogy, starting from lesson plan, resources, training and students' performance.

The data collected revealed that the meaning of support might be different for both, the level of support provided by the principals did not match with the expectation of the teachers. Teachers are the key tool for any initiative to be successful. Principals as technology leaders must use this tool wisely.

Principals assumed that they motivate their teachers in using technology in the classroom practice. They used this word for the sake of using it without giving any clear example of how to motivate their teachers. Furthermore, none of the principals had any idea how they motivate their staff for technology integration.

Teachers suggested that principals must develop a culture where they inspire their team in terms of using technology. They should organize specific meetings, showcasing ICT use and display some kinds of ICT initiatives. They should take a lead to show the value of this concept. Teachers admitted that the element of motivation is missing in school culture from principals and from teachers whereas it is very high among students.

A number of significant factors were observed during the interviews; the principals did not grow with the technology rich environment in their years of service, so their attitude might take a little time to be moulded towards the use of ICT. All the principals interviewed were working in the capacity of principal for more than five years and in the profession of education more than 15 years. They did not get any in-service training on ICT for its effective use in teaching and learning purposes. Principals did not have ICT literacy and expertise so their perception and attitudes towards ICT was not strong enough to consider it as positive by the teachers. It was evident that the principals valued the importance of ICT in the teaching and learning process as well as for their own managerial and administrative tasks. However, they still need trainings and guidance to develop such a healthy and positive attitude towards technology integration which provides assurance of positive support to the teachers. Principals' attitude did not have much significant influence on teachers' adoption of using technology integration in the pedagogical practices. However, the attitude held by students had a significant influence on the schools e-learning culture.

Instructional Leadership

Principals of the schools strongly agreed on the need to provide the ICT training to the teachers. However, they could not demonstrate a clear relation between professional development and ICT training. According to the teachers in one private school; there is a lot of pressure on them to use technology but there is a lack of resources and training. Due to fewer resources, lots of students' time is wasted.

Another group of teachers said:

> *"How can the administration expect the use of technology in the class, we do not have enough and up to date resources. There is no proper training plan for us. There is no proper assessment structure for technology integrated lessons. We as teachers have to face lots of challenges; we use technology according to our own skills and if it's not up to the level then who is going to train us. The ICT part is all done based on Swim or Sink approach. We are ready to learn but do not have the learning opportunity. It's totally our own understanding."*

Every teacher in the school has professional development needs and the lack of professional development is a big barrier towards technology integration. Teachers believed that

professional development is an essential part of teaching which ultimately benefit learning of the students. A senior teacher said:

> *"We demand systematic trainings in using new technology tools which can improve our IT skills and teach us the effective use of technology also. I have started my teaching years back and not trained how to teach with technology tools. I as a teacher have right to get technology training."*

Principals did not have much understanding of the benefits of technology integration in terms of pedagogical practices. They used it as it merely to meet the requirements of the day. They considered it as a buzz word. Teachers use it because they are bound to use whereas principals ensure the use of technology administratively. One of the principals said:

> *"Technology is everywhere; it's the need of the hour. Use of technology should be mandatory for schools; it's my responsibility to ensure that teachers are using technology in their lessons. Technology saves time, it motivates students towards learning."*

The principals and teachers believe that the use of technology is significantly increasing its place in education and there is no other replacement for that. However, the concept of effective and meaningful use of technology to develop pedagogy is still missing.

Principals and teachers were sure that students' performance is much better while using technology. Their understanding level increases as they use technology and their interest level develops because, as one teacher replied during the interview, they are the natives of technology era. She continued to say that students have command over the technological resources, their research skills with the help of technology are so sharp that we, the teachers cannot compare ourselves with them. Our teaching is slower than their learning.

Students ICT integrated work was being observed in the schools. Students' understanding and performance for using technology during the computer period was also being observed. Students' performance was very good while engaged with technology. They behaved as independent learners. They had control of their own learning. They were experts in using the tool and that expertise gave them confidence of being an excellent learner, even of technology. The IT skills, confidence, interest, comfort and motivation; all made them

inclined more towards showing good performance. On the contrary, the level of teaching was weaker than the level of learning.

Visionary

The data revealed that the concept of technology integration exists in the schools with a very basic understanding. The principals believe that technology is being used in the school as a teaching and learning tool and they are the main personnel to initiate this culture.

A common theme that emerged from the data that the principals and teachers disagreed that a lot of emphasis has been placed on the use of technology in the schools and a vision is developed in the school for ICT integration. Both the indicators are interlinked and directly reflected through the principals' role and responsibilities. The vision of any initiative and change is created and developed by the principal; it penetrates with a top down approach. The principals had the vision of technology use in the school but the effective and meaningful use of technology was rare in the pedagogical practice. Teachers were reluctant to use technology to promote learning of the students. They considered it as a technology tool which is necessary for students to learn.

A school improvement plan is an important document mainly prepared by the principal. Technology integration had not been kept a priority in most schools. As I checked the developmental plan of the schools, only three out of ten had allocated some budget in terms of technological resources. There was not a single plan in terms of technology integration witnessed.

Conclusion

I divide my research into three parts; the first part was to explore what is the understanding of the principals and teachers of technology integration; second part was to study whether teachers use technology integration in the teaching practice and third part focuses on the principal's role to complement the first two parts.

School principals occupy a leading position in schools. They work as a leader, a manager, an administrator, change initiator and policy maker. They adopt various strategies to get into relevant roles and responsibilities.

It was identified through the survey questionnaires and interviews from the school principals and teachers of those schools that the principals work more towards an autocratic style of leadership. Teaching and learning is considered to be dealt with as from an administrative point of view; keeping records of what happened and when, whether the curriculum is being followed, if assessments are done on time, copy checking schedule being followed, computer period being utilized etc. The school scenario which prioritizes classroom practice is missing.

The connection between the concept of technology integration and principal role was not clear and strong either to the principals or to the teachers. They are not aware of the concept of meaningful learning and critical thinking through effective use of technology. Teachers are using technology according to their own skills and capacity without any training. The ICT integration approach is not systematic neither they have any specific plan. There should be a structured plan with the principal to enhance technology integration in the pedagogical practices, involving all stake holders.

The principals must create such a vision where technology plays a pivotal role to enhance teaching and learning. The principals should depict the role model attitude towards technology integration by exhibiting its use in their tasks and encouraging teachers to use as an effective tool. The principals must develop the evaluation system that includes conceptualizing the effective use of technology in the pedagogical practices.