E-Learning: How It is Changing the Teaching Learning Landscape in Schools of Pakistan

Anila Zaidi

M. Phil student at Agha Khan University
Institute Educational Development
syeda.anilazaidi.mphil18@student.aku.edu
anila.zaidi92@gmai.com

Abstract

This study unpacked the experiences, productiveness and challenges of E-learning, online and blended teaching learning in a Pakistani school. The article presents the experiences of teachers, students, parents and school management who are involved in blended teaching-learning procedures. The research was carried out in a private secondary school located in Karachi. The school leader has introduced blended learning with the vision to provide quality education according to the needs of the 21st century and the digital natives. A qualitative grounded constructivist method was adopted, data was collected from 10 participants, students as the primary participants and teachers and parents as the secondary participants. Semi-structured interviews and observation methods was used for data collection. Open coding, axial coding, and selective coding was used for analysing the data. The result is presented in narrative form. It was found that blended learning helped students to become independent learners but need intellectual and technological capacity building of the teachers and challenge was the fixed mind set of different stakeholders.

Key words: E learning, blended learning, independent learner, capacity building, digital natives, globalization, fixed mind set, gadgets, technology, growth mind set

Introduction

As the world is now a global village and entered in the digital era, rapid advancement and changes have been taking place in the social, economic, political and all aspects of life leading to the need to reset and redesign the education to meet the requirements of the digital era. The teaching and learning paradigm have been shifted from traditional teaching to student centred teaching learning pedagogies to deal with the digital natives. The main purpose of education in this era is to produce independent learners and teachers as facilitators. This study analyzes the importance of E learning that is "teaching and learning through the gadgets and electronic media for better out comes (Clark & Mayer, 2011). E learning is different from the traditional methods of teaching. Students learn through electronic media, internet, devices and computers in and out of the class room according to their own pace and convenience.

The article explored the experiences and perceptions of teachers, students, parents and school management who are involved in blended teaching-learning procedures.

Rationale of the study

There were many reasons to explore the experiences, productiveness and challenges of E-learning, online and blended learning and teaching pedagogy in Pakistani context. Firstly, E learning is a need of the modern era and learners spend most of their time on gadgets. The educators are interested in E learning globally and their interest is accelerating day by day. Technology is transforming the nature of education, modes of teaching and learning and the role of educators. It has been revealed that wherever E learning has been constructively adopted, it has great impact on learning process, standard of teaching and learning, providing immediate feedback, and making learning interesting (Nyaga ,2011). Parents, education policy makers and educators should be aware of their children digital competencies and provide them guidance for the positive and fruitful utilization of ICT tools.

Secondly, the need of the ICT integration, E learning and training to the teachers to meet the needs of the modern time is also emphasized by our national education policies. The National Education Policy (Govt. of Pakistan, 2009) states "E learning shall be adopted to strengthen the

standard of teaching and educational management". To prepare teachers for their new role in teaching with ICT, continuous expansion and further opportunities for teacher learning will be welcomed. It is further elaborated that "Introducing ICT in schools imply that we need to prepare teachers to facilitate the process in that all teachers need to persuade content and methodology not the level of sophistication with hardware and technical skills" (Draft NEP, 2017).

Thirdly, international studies also emphasize upon the need of the E learning in teaching and learning, "Technologies are being adopted and incorporated into our daily lives and in our educational system, particularly ICT which has the power to change the methods of teaching and learning in the classroom" (Lawrence, 2013). "Learner can choose what they want to learn, when and where to learn, which provides them independence, a feature of lifelong learning" (Cradler & Bridgforth, 2002; UNESCO, 2004). ICT enables students to collaborate and connect with students around the world.

Significance of the study

This study was important because E learning is necessary to connect with the need of the time. I was interested to explore the impact of E learning in teaching and learning in a secondary school in Karachi. I am a part of this school. This research explored the impact and perceptions of the students, teachers and parents about the E learning. The study will be beneficial for school education providers, teachers and other stakeholders. While this study was carried out in a private sector school, the findings will also be helpful for the public sector. Globally, educators are also struggling to identify their role in teaching and learning, the findings of this research also contribute, though in a small way, to fill this gap and help teachers to identify their role and make E learning more fruitful and productive.

Literature review

E learning is learning through the internet, gadgets and electronic media. E learning and ICT are the best tools for teachers to meet the demands of the time, it encourages participatory culture among students and teachers (Anastasiades, 2017). The purpose of education is to develop

four Cs i.e. critical thinking, communication, collaboration and creativity among students Another 10Cs are added in the list such as critical consciousness, connectivity, critical reflection, co responsibility, cross-/intercultural understanding and constructing knowledge. These skills support to achieve the aims of the digital era. These are possible just because of the ICT (Makrakis, 2017).

Change in teaching and learning due to E learning
Through the use of technology now we can teach large classes (Gunn & Harper, 2007). Technology provides opportunities of peer assessment which improve learning and students learn from each other (Hamer, 2007). Students can also assess themselves by generating objective test items banks.

E learning in Pakistani context
The need of the ICT integration and prepare educators to fulfil the needs of the modern time was also emphasized by our national education policies. "Introducing ICT in schools imply that we should train teachers to facilitate the procedures" (Draft NEP, 2017).

Methodology
The research was carried out in a private sector secondary school located in Karachi. A qualitative grounded constructivist (Charmaz, 2006) research method was adopted for this purpose because it helps in presenting the data and findings in more detail and descriptive form. Qualitative research is more exploratory in nature, show the whole and in-depth picture and helps to explore the experiences, benefits and challenges related to the issue.

Research methodology
Grounded method was adopted because this research mainly unpacked the experiences, productiveness and challenges faced by the teachers, parents and student when while adopting E learning, blended learning and online teaching learning pedagogies in a community based private school. Grounded theory method is used because it helps to find out the experiences of the participants. Grounded theory is a qualitative

research design in which the researcher collects data of processes, actions, or interaction shaped by the views of many participants (Strauss & Corbin, 1998).

Researcher adopted a constructivist or interpretivist approach because different stake holders have different perspective about the adaptation of e-learning in their school. In a developing country like Pakistan, people are strongly attached with their traditional methods and thoughts about the teaching and learning process. While the researcher as a constructivist believes that reality is socially constructed, and everyone has freedom to keep their own views and perspectives about the issue. Constructivist approach welcomes the viewpoints of all stake holders according to their own experiences and perceptions about the phenomena because all stake holders belong to the diverse social, economic and political groups.

Participants of the study

This research explored the perceptions of teachers, school administrators, and students regarding the E learning. Students views supported me to make the analysis about the teachers' perceptions because students are the best reflectors of the teaching practices. These students previously have experience of learning without ICT integration so, they can better analyze the differences between the E learning and traditional teaching and learning.

Researcher selected 10 participants for data collection, students are the primary participants and the teachers and parents are the secondary participants. Six students- three girls and three boys of secondary classes, two teachers and two parents were selected. Researcher obtained prior written consent of the participants and informed all participants about the purpose of the research. The detail of the participants is given below:

Male Participant Students labelled as A, B and C
Female Participant Students labelled as D, E and F
Participant G: male experienced teacher
Participant H: Female fresh teacher
Participant I: literate Parent belonging to a strong socio-economic back ground

Participant J: Illiterate parent belonging to a weak socio-economic back ground

Description of the data collection tool
Semi-structured interviews and observation were used for data collection.

Semi structured interviews
Semi structured interviews helped the researcher to explore the experiences of teachers, parents and students about E learning process. Researcher asked questions which helped to unpack the experiences of teachers, parents and students about the E learning, blended and online teaching and learning in class room. Researcher asked the students about their experiences about the online learning, major differences between the classroom learning and working on laptops, how online learning is more fruitful and productive to strengthen the concepts of different subjects, what are the challenges faced by them during online learning? Researcher asked the teachers about their experiences of online learning from designing specific learning objectives to the evaluation, the types of challenges they face in term of planning, availability of resources, their own IT capabilities, attitude of management and stake holders towards them, role of management in teachers' technological capacity building, role of online learning teaching pedagogy in attaining the major goals of education? Researcher asked the parents' views about the online learning, its fruitfulness and challenges? Do they think that online learning help achieve the major purpose of education and be beneficial for their children in future? what are their opinions that online learning support children to become a global citizen? During the procedure of interview researcher probed and asked follow-up questions to explore more deeply about the issues and gathered clear responses of the participants about the related issues. Semi structured interviews allowed researcher to add questions according to the need. Researcher after each interview immediately generated the transcript.

Observation

Researcher also observed students working in labs on their own laptops independently, watching different videos and listening lectures from other teachers in other countries. Teachers prepared lesson plans on blend space, Socrative, Edmodo and play pause it and sharing their lesson plans with the teachers and taking benefits of others lesson plans, students using Khan Academy and another fruitful website. I observed the best examples of collaboration and cooperation among the teachers when they share their lesson plans and ideas with others and using ideas of others for the benefits of their students. Observations helped researcher to analyse the data collected through the interviews. Researcher cross verified data and collected data about the live experiences of the participants specially students when they engage in online learning on their laptops. Researchers also observed the challenges faced by the teachers and students in the labs. She observed the parent-teacher meeting, which provided golden opportunity to collect real experiences and feelings of the parents about the online learning and unpack the mindset and perspectives of the parents and the community about the internet, computer and negatives of the screen.

Data collection was completed over a period of two months and researcher stopped data collection when it was felt that no new information emerged to add to the understanding of the issue.
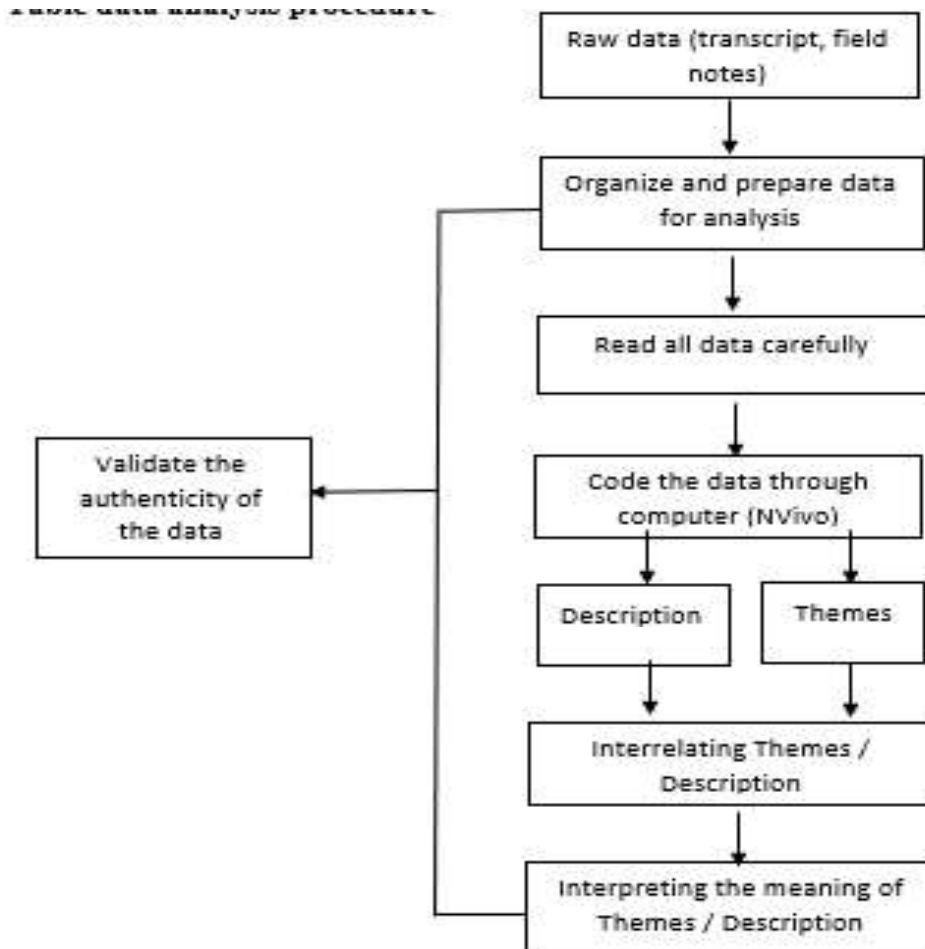
Figure 1. Data analysis procedure

Data analysis

The data was analysed in different steps. Open coding, axial coding, and selective coding were used for analysing data. Researcher analysed the data according to the objectives of the study which is to unpack the experiences, productiveness and challenges faced by the educators, parents and student when they adopted online teaching learning pedagogies. On the first step researcher made categories of the obtained data like experiences, challenges and productiveness of online learning pedagogies of different participants like teacher, parents and students.

There was huge and diverse data and it is a complicated task to categorize a saturated and huge data because each participant has diverse views about the online learning because of their diverse experiences and socio-economic background. They have different perspectives about the internet and digital devices. Teachers also have different perspectives about the usage of internet when they have long experience of traditional, teacher-centred and only class room teaching. Researcher coded and separated common ideas and experiences of the participants and form categories of the issue. After the first step of open coding and identification and separation of categories, Researcher in the axial coding assembled the data in a new way. In the end Researcher connected all the categories and data collected from different participants. After connecting all categories the researcher prepared findings and conclusions. The findings were presented in descriptive form.

Results and findings

In this study five categories emerged from the experiences of teachers, students and parents about the execution of online teaching learning pedagogy in the selected school i.e. 1) online learning need of the digital era, 2) advantages, 3) disadvantages, 4) challenges, and 5) suggestions to resolve the hurdles.

Table 1
By participant findings

Participants	Online learning need of the digital era	Advantages	Disadvantages	Challenges	Suggestion to resolve the hurdles.
Participant A: male student	I am very much found of working with	Safe time give more practice. work on different websites	Waste more time, Less interaction with peers	English accent cannot understand. Do not have	We need more practice to work with gadgets. Governme

	gadgets.	like khan academy and blend space. Do assignments online and prepared ppt and videos.	which provide opportunities to build cooperative, supportive attitudes	internet facility at home	nt should provide internet facility free of cost.
Participant : B male student	I like to work on laptops, as we started working on devices education became fun for me.	Watched interesting videos and animations. We can do riddles, puzzles and other activities more and more time.	No or very less written work, reduce writing practice.	Technical issues occur which create hurdles to continue task.	Load shedding and power failures should be resolved.
Participant C: male student	When we always engage in using gadgets so why not in studies.	We can continue our work at home as well. Now we do not need to work on copies and written		Parents do not allow to spend more time on screens	Parents should allow us to use gadgets at home as well.

		work			
Participant D: Female student	Online working is the need of the time.	Colorful pictures, interesting videos, charts, we can have watched and listen and work on different activities as much we want. We do our work at home as well.	Get less time to interact with teacher and peers. less classroom activities	Power failure (load shedding) Get ready made items from other sites	
Participant E: female student	I enjoy working on laptops	We can see our performanc e and results at the same time in online assessment, give us chance to do assessment many times to get desirable	Complicated concepts need clarifications . Less written work	No facility of internet at home and get limited facility at school	We should prepare our own software and educationa l websites

			results.		
Participant F: female student	I like to study online	We can interact and see other people work, share ideas and assignments with others. promote interaction	I like class room discussion and teachers lecture and explanation and more project and group work.	Sometime laptops and headphones do not work properly	Need to change the attitude of the society about the use of gadgets.
Participant G: male experienced teacher	Its 21st century and the era of technology and media. there is rapid increase in the use of devices and internet.	Devices increase student's involvement; students take more interest in studies. Studies become fun for them	Increase the burden of teachers on planning stage. We cannot ignore the importance of classroom teaching. Decrease interaction with teacher and peers which create a cooperative and supportive attitude in student, teacher as a facilitator.	Untrained teachers, lack of training opportunities, every student does not have internet and devices at home, so they could not practice at home. Mostly parents are not familiar with the use of	Provide training to teacher. Need teacher's rapid technical capacity building by school management and government. Through awareness programs change the attitudes of community. Governme

| | | | the values student learn with the teacher devices cannot teach values and virtues. No more relation and interaction with books. | devices. Students misuse technology and mostly waste their time on irrelevant material. Traditions and cultural values are obstacles. If student is not able to write how they will perform in centralize exams system which is based on traditional methods. | nt should generate more power resources to overcome again and again power failures. Redesign centralize assessment system which is based on traditional methods |
| Participant H: Female fresh teacher | We cannot imagine life without devices, | We want to prepare our students for the globe. Students become | Devices cannot replace teachers. less writing practices. | Need to review our national curriculum and text books. | We should continue our efforts do not give up. things |

Wi-Fi, internet and digital technology. As a teacher we are dealing with the digital citizens and 21st century students. We can communicate, learn, get information through internet. We should integrate our education system with information technology on emergen	independent learner they learn according to their own feasibility, pace and convenience. There are so many educational sites, videos, activities and information available on internet. Positive use of devices.

We input data only one time and so many students use that. Save our time. Online assessments and less | negative impacts on student's eyesight. Students waste their time on irrelevant sites | Power failure again and again. Mostly parents are not aware of the use of devices and even its importance. Teachers are not trained. students misuse devices. | change but takes time.

Need to revise our national curriculum text books and standardized assessment system according to the need of the digital era. |

	cy bases to give training to our children to work with devices.	written work less down the burden of correction. We can see students' performance on the spot and share to the parents through email			
Participant I: literate Parent with strong socio-economic back ground	Appreciative initiative of the school because digital learning is the need of the time.	Children can continue practice at home as well. Children can become an active citizen in the digital era. We keep informed about student's performance through e mails.	Less interaction with the teacher and peers in school and other family members at home. Less importance of writing, we cannot ignore the importance of writing skills.	In Pakistani context everyone cannot afford devices. Our social and traditional system of education and standardize test	Government should decrease the prices of devices, internet and WIFI. Provide more training opportunities to the teachers and others about the digital technology. Government should redesign

					standardized assessment system
Participant J: illiterate parent with weak socio=economic back ground	How children can learn without books and copies.	Children better know the use of devices.	Always keep busy on devices. Waste of time, resources and energy. Students do not work on copy how we get idea about their performance. Parents cannot understand and check email to get to know students' performance.	Parents do not know the use of devices. No one at home can guide students and keep check and balance. parents cannot afford devices.	This type of initiative works only in developed countries not for Pakistan.

Discussion
What is E learning

The meaning of E learning is "instruction delivered by any technological mode intended to promote learning (Clark and Mayer 2016). E learning is a pedagogy different from the traditional methods of teaching. Students learn through electronic media, internet, digital gadgets and computers in and out of the class room according to their own pace and convenience. E learning is a modern trend in education especially for a developing country like Pakistan.

Why E learning

Respondents expressed that E-learning is to prepare our students for the global village, fulfil the requirements of the digital era, teach them about the better use of technology, share our ideas with others and benefit from the ideas of others, activities, videos and assessment in our school. E learning provides opportunities to the learners to learn independently.

Measures taken by the school management to start online teaching learning pedagogies

The school leader has started blended learning in a secondary school located in Karachi with the vision to provide quality education according to the need of the 21st century and the digital natives to achieve the main aim of the education to bring change in the life of individuals and society. Before introducing E-learning, they shared their ideas with the parents, teachers and all the stake holders, prepared labs for each subject, hired technical staff who could assist teachers and students, provided technical training to the teachers, purchased generators for the nonstop power supply.

Advantages of the E learning

According to the findings of this research e learning is the best way in the digital era to teach our students. Learners learn according to their own convenience and pace. Students can continue their task at home as well. Students can repeat their task again and again. Teachers and students get chance to share their ideas and get ideas from others globally. E learning keeps informed the parents about their children's performance. It saves time and reduces the burden of teachers. Students also become independent learner.

Disadvantages of E learning

The participants feel that E learning reduces the role of teachers and students. Students have more interaction with gadgets and teachers play their role only as facilitators. While we cannot ignore the importance of teachers in the character building of children, their reduced role becomes a matter of concern.

Due to more involvement with the digital devices there is less interaction with the peers. Students waste more time on irrelevant sites. They opined that human interactions are very important. In traditional classrooms students interact with their peers and teacher which supports their personality development and inculcation of values Teachers feel that E-learning has negative impacts on students' behavior and attitude.

Challenges faced by the different stakeholders

This research reveals that to execute E-learning teaching methodology in Pakistani context many challenges are faced by the teachers, parents and students. Teachers required a lot of time and effort to input data and prepare online lesson plans. Other Challenges are the untrained teachers, scarcity of power resources, fixed mindset of the society about the traditional teaching learning pedagogies and digital devices and internet. Students do not have internet and WI FI at their homes because their parents do not afford expensive devices and internet. It is perceived that students waste their time in doing irrelevant activities on internet.

Suggestions to resolve the hurdles

The findings of this research suggest that a lot of struggle is required to promote E learning in Pakistani context. There is a need to change the fixed mindset regarding traditional teaching methods. Government should revise the curricula, start awareness campaign to promote the importance of E learning. Teachers need technical capacity building and IT training. Government has to take initiatives to generate power resources to reduce load shedding and power failure crisis in the country. Government should also provide free or low-cost internet and WIFI facilities in the country. Educational institutions should arrange awareness programs for the youth to use digital devices and internet fruitfully.

Conclusion

The objectives of this study were to unpack the experiences, productiveness and challenges of E-learning, online and blended learning and teaching pedagogy in Pakistani context. As the world is now a global village and entered in the digital era, rapid advancement and changes have

been taking place in the social, economic, political and all aspects of life. The teaching and learning paradigm have been shifted in the 21st century, traditional teaching to student centered teaching learning pedagogies to deal with the digital natives. The main purpose of education in the digital era is to produce independent learner who can play their role as active citizens and teachers who can play their role as a facilitators. This study analyzes the importance of E learning.

   The article presented the experiences of teachers, students, parents and school management who are involved in blended teaching-learning procedures. The school leader has started blended learning in a secondary school located in Karachi with the vision to provide quality education according to the need of the 21st century and the digital natives to achieve the main aim of the education to bring change in the life of individuals and society.

   The data revealed that parent, community and few teachers prefer the traditional approach, they consider the use of internet and gadgets as waste of time and resources. Parent belonging to different socioeconomic background have diverse views about E learning. They were skeptical about children learning without books and notebooks. Parents are either not aware of the use of digital gadgets or they have very basic skills to use gadgets. That is why they cannot guide their children. No one at home can guide students and keep check and balance. Many of the parents cannot afford digital devices.

   According to the findings of this research e learning is the best way in the digital era to teach our students. E learning provided opportunity to the students to learn according to their own pace and convenience. Students can continue their task at home as well. Students can repeat their task again and again. Teachers and students get chance to share their ideas and get ideas from others globally. E-learning keep informed to the parents about their children's performance. It saves time and reduces the burden of teachers. Teachers have to input data only one time and that can be use several times and edited easily. E-learning provides opportunities of formative and summative assessments. Students can be assessed again and again. There are many apps and websites such as Socrative which provide opportunities to the students to assess themselves. These apps reduced the burden of teachers of papers

corrections and results preparations. It is become very easy by the use of E-learning to share students' performance with their parent through email. Students become independent learner.

Findings of the research reveal that blended learning helps students to become independent learner and learning becomes fun for the students. Students learn according to their own convenience and pace and can repeat their task again and again to get mastery. Findings of the research unpack that to start E-learning in a secondary school in Karachi school management provided IT based trainings to the teachers, hired IT trained staff and technical persons. School management arranged awareness session for the parents and community members to emphasize the importance of E learning in school to overcome the challenge of fixed mindset of different stakeholders. School management is struggling to face challenges.

The findings of this research revealed that in Pakistani context E-learning can be adopted if government takes initiatives on the national level. Government should run awareness programs regarding the use of gadgets, encourages people to use gadgets constructively and productively, and eliminate energy crises in the country to minimize a load shedding. It also needs professional development of the teachers in the implementation of e-learning. Government should provide free or low-cost internet and WIFI facilities in the country and subsidize the prices of the gadgets.

Article presented the findings of E-learning teaching pedagogies introduced in one secondary school in April 2017. The data presented in this article is based on only one-year experience of E-learning teaching pedagogies. It's just a starting point and a lot of efforts are required to get better out comes.

Recommendations

This study presenting the findings of only one private secondary school in Karachi, Pakistan in the urban context. There is a need to conduct a research in different other parts of Pakistan in rural and urban both contexts. This research was carried out on small scale and the data presented in this article is based on only one-year experience of E-learning teaching pedagogies. There is a need to carry out this type of research in public and private sectors to explore the real situation of E learning in

Pakistani context, because there is a wide gap between public and private sector schools. The physical structure, education standard, teaching methodology, quality of teachers and fees structure are totally different in the public sector schools. To know about the real situations about the E-learning research should be carried out in different socioeconomic back ground in the country.

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