

Navigating Digital Era Challenges: Resilience Among Educators in Sindh (Pakistan)

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Abstract

This research aimed at establishing the coping techniques that teachers in Sindh, Pakistan have adopted to deal with impacts of digital age. Qualitative case study research design was used in this study. Ten teachers from various teaching backgrounds in Sindh was selected to collect the data. The purposeful recruitment of these participants was with the intention of capturing possible diversity in the participant's experiences and Precarious Academic Interests, such as teaching in rural and urban areas and in the public as well as the private schools as well as in terms of their readiness with digital learning resources. The results of the research show that educators' resilience not only involves the technological perspective of how they accommodate themselves to learning, but also is a combination of cognitions and emotions, professionalism, collaboration, and individual flexibility. Teachers managed challenges of digital education on teaching by creating anticipatory measures and asking for help from other teachers as an illustration of strength of interpersonal connections. The work provides the educational leaders and policymakers with the insights of how to ensure the teacher flourishing and their professional development in the context of the continuous digitalization of education.

Keywords: Teachers' Resilience, Challenges of Digital Age, Emotional Intelligence, Professional Development.

Introduction

Technological advancement and the advancement of technology into the classrooms has dramatically changed teaching learning environment in various parts of the world (Barlow, 2020). Teachers as such especially in developing regions such as the Sindh in Pakistan go through or experience such changes as transform their learning approaches to digitalization. While social media expels the teaching learning process into new and innovative strata, it simultaneously expects teachers and students to provide a coherent and structurally sound teaching learning process which is often unachievable due to a lack of resources, training and institutional support. Therefore, it is recognized that the teachers' resilience becomes a key factor in meeting the challenges related to the use of technologies in education today (Gu & Day, 2020). Therefore, resilience, which has been understood as coping mechanism and a system of characteristics which constitutes an ability to manage misfortune and bounce back from reverses, is not just personal. In schools, resilience defines a teacher's and or a school's capacity to effectively respond and remain effective amidst crises (Gu & Day, 2020). The purpose of this research is to understand different coping methods as well as resilience measures that teachers in Sindh province of Pakistan adapt while facing challenges of the process of digitalization.

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Knowledge of these strategies is therefore important in designing policies and practices that help teachers sustain their instructional efficiency and well-being in face of progressive advancements in information technology (Bellman, 2019).

Literature Review

Resilience in Education

Research on resilience has been conducted in different fields among them being education. According to Gu and Day (2020) resilience of educators embraces emotional, social as well as professional aspect. Teachers have to consider these aspects bearing in mind that they are faced with both individual and systemic demands (Beltman et al., 2019; Trust & Horrocks, 2020). In a modern world, such as digital, resilience also encompasses the capacity to learn all novelties appearing in the technologies field and thus, to incorporate these ones into teaching practices effectively (Petrides et al., 2021; De'Costa & Renshaw, 2021). But now, resilience also means response to technological advancement and how to incorporate them into teaching and learning in the teaching learning processes effectively (Petrides et al., 2021).

According to the findings of Beltman et al. (2019), teacher's resilience comprises of personal resources including self-efficacy, optimism and resources from colleagues and institutions. These and a host of other factors make it even more important that teachers, particularly in impoverished districts like Sindh are able to foster and maintain their resilience (Mukhtar et al., 2020). Similar to the study of Rehman et al. (2022), the present study also reveal that educators of Sindh faced resistance and have low support and resource from their institutions rather they prefer to use own resources to cope with the challenges.

Digital Era Challenges for Educators

The current digital age comes with lots of problems to the teachers especially in the developing countries. Such difficulties are the difficulties related to digital divide, insufficient number of resources, the absence of professional development, 'technostress' that exists when people have to adapt to using technologies (Schleicher, 2020). However, in Pakistan the problem is magnified by inequality in socio- economic status, where many teachers do not have robust internet connectivity, gadgets or professional development (Rehman et al., 2022). Besides, the COVID- 19 outbreak has widened the digital divide between the rural and urban areas that made the situation even more difficult for teachers (Mukhtar et al., 2020).

In addition, the challenges were escalated by the sudden learning shift to online teaching due to COVID-19 outbreak (Mukhtar et al., 2020). A surprising number of educators found themselves underprepared for the change and struggling to build efficiency in using digital tools, all whilst having to emotionally grapple with the pandemic on top of that (Sokal et al., 2021). This period emphasized the need to persevere in providing education as well as changing with the current shifts in education systems (Rehman et al., 2022).

Resilience Strategies in the Digital Era: Having identified some of the challenges that affect teaching and learning in the digital age, here below are some of the resiliency strategies that have been embraced by educators: Some of these practices include one's professional development as continuous, seeking for peer supervision, and embracing a growth mindset (Beltman et al., 2019). Emotional intelligence is also useful for teachers in stress regulation, student relationships and professional confidence (Petrides et al., 2021). Such strategies reveal the strategies that teachers employ in building their ability to cope with risks in volatile conditions, which is covered by Schleicher (2020).

In this way, the concept of resilience is not only a kind of people's mental attitude but also has some support on the system level. Work places that support teachers' collaboration and offer sufficient professional development and resources can improve their coping capacity (Sokal et al., 2021, p. 5). In Sindh however, institutional support is sometimes lacking and the point that has added here is that one has to build the ability for resilience by himself or herself (Mukhtar et al., 2020).

Research Methodology

A purposively this research work used qualitative case study research method for focusing on the resilience of educators in Sindh, Pakistan. The case study method is most suitable while studying the multifaceted aspects of social reality in natural environment and exploring the details of participants' activities (Yin, 2018). The method also enables the collection of more than one type of data which is essential in capturing the different views of educators to the digital challenges (Beltman, 2019).

Participants

In qualitative research, the determination of sample size is contextual and partially dependent upon the scientific paradigm under which investigation is taking place. Theoretical saturation can also be useful as a guide in designing qualitative research, with practical research illustrating that samples of 10 may be cases where data saturation occurs among a relatively homogeneous population (Boddy, 2016). Therefore, for the purpose of the study, the researcher selected ten educators from various teaching backgrounds in Sindh. The purposeful recruitment of these participants was with the intention of capturing possible diversity in the participant's experiences and Precarious Academic Interests, such as teaching in rural and urban areas and in the public as well as the private schools as well as in terms of their readiness with digital learning resources (Sokal et al., 2021).

Data Collection

Data were collected through three primary methods:

1. In-depth interviews: This involved carrying out semi-structured interviews with each participant to establish their experience towards digital challenges and resilience efforts (Yin, 2018).
2. Non-participative observation: The facts based on participants' teaching practices helped to explain how they address digital issues in their classes further (Braun & Clarke, 2006).
3. Document analysis: Institutional documents, including the professional development plan and the school policies were used to get a broader perspective of the working environment of the educators (Mukhtar et al., 2020).

Data Analysis

The data were analyzed using the approach of thematic analysis of discourse to define typical patterns and strategies of participants' narratives. This method is most suitable for use in context where research problem involves understanding of complex phenomena like those that are of quantitative nature (Beltman et al., 2019). It also helped THEMATIC to determine individual and collective resilience profiles and provide further understanding of educators' coping mechanisms.

Findings

Theme 1: Emotional Intelligence and Self-Regulation

Emotional regulation was found to be one of the major components of teachers' resilience. Some of the participants said that psychological stress due to the change to digital tools were reduced by their ability to regulate their emotions (Petrides et al., 2021). From the findings they established that, teachers with higher emotional intelligence were able to manage their emotions easily, relate in positive ways to students as well as sustain themselves (Beltman et al., 2019). For instance, one of the participants said, "The day-to-day variations in the implementing digital platforms caused me to feel very overwhelmed," but after some time, it changed and the participant was fine with the ok message embraced (McGarr O'Neill, 2020). This is in agreement with the self-compassion and, to some extent, emotional dysregulation as an essential component of resilience (Petrides et al., 2021). Emotional intelligence can therefore assist in reducing stress associated with change in technology which is essential in the teaching profession of current technological society (Sokal et al., 2021).

Theme 2: Continuous Professional Learning

Despite the lack of the practical implementation of the professional development program, the educators looked for opportunities to develop themselves professionally to improve their digital competencies (Rehman et al., 2022). This active approach to learning was among the resilience management measures to enhance to educator's efficacy in the face of digital difficulties that were noted by Beltman et al. (2019). In their study, Mukhtar et al. (2020) established that participants highlighted that they followed online courses, attended webinars and created informal communities of practice with colleague teachers for the sharing of knowledge and resources.

In one case, a teacher said: "I saw that I was unable to rely on the school to get the training and thus followed the steps to get the training on my own I took a free online course on digital teaching techniques" (Sokal et al., 2021). This underlines the importance of self-instruction towards retaining everyday efficacy in one's working practice (Schleicher, 2020). The insistent on lifelong learning is aligned with the changes in teachers training where teachers have to assume the responsibility of their personal development (Gu & Day, 2020).

Theme 3: Interpersonal Support and Collaboration

Another potential factor in maintaining resilience of OD practitioners was peer support (Beltman et al., 2019). Quite a number of teachers developed professional learning community with colleagues where they pool resources and information and emotional support (Petrides et al., 2021). These eight networks gave the teachers a feeling of belonging and togetherness especially when they are stressed up and lonely while teaching online (Mukhtar et al., 2020).

One of the participants said, "We use the WhatsApp group to share with our colleagues on what we face daily and recommendations on how to use the various digital tools. At least someone out there is experiencing the same challenge. (Sokal et al., 2021). This goes to show that farmers are not alone in facing such adversities but other actors in society as well; there is therefore need to foster partnerships in developing what Schleicher (2020) refers to as collective security. This also creates a sense of belonging that is important for the teachers particularly in times of COVID 19 crises (Gu & Day, 2020).

Theme 4: Adaptation to Technological Change

The perceived threat of technological changes was evident by the fact that most participants mentioned that the adaptation to the new technologies was difficult, though, those participants who

saw digitalization as a chance for personal development, were found to be more resilient (Beltman et al., 2019). These educators had a growth mentalize, thus, the opportunities in the digital field where they started learning with the curiosity mindset (Chaka & Eze, 2021).

Another educator said, 'I was hounded by it in the beginning with all the new gizmos and gadgets but then it just dawned on me that it is a way to get more creative in the classroom' (Schleicher, 2020). This stresses on the theme of understanding on how people are able to transform reality and bouncing back (Sokal et al., 2021).

Discussion

In this study, we reveal the complex nature of the educators' resilience in the context of the challenges characteristic of the digital age in Sindh, Pakistan. The findings therefore resonate with existing knowledge emphasizing on emotional intelligence, capacity to learn, interpersonal support and flexibility as approaches that foster resilience among teachers (Beltman et al., 2019; Petrides et al., 2021). That said, this study offers precise findings on how these factors play out in the Sindh's educational setting whereby socio-economic factors, setting up and access to digital resources and institutional support exacerbate the teaching challenges (Mukhtar et al., 2020).

Emotional Intelligence as a Core Resilience Factor

Another major theme that arose in this study is the teachers' use of emotional intelligence, which is in line with prior studies that posit that emotionally intelligent teachers manage stress more effectively, and continue to remain effective professionals (Petrides et al., 2021). This study proved that self compares /self-care and emotion regulation are among the key components of the coping strategies deployed by participants in this study. It is important in general for teachers but is especially relevant to practicing educators in Sindh, where educators must deal not only with the pressures of online education but also with the social- economic realities of students and their communities (Rehman et al., 2022).

Maintaining low levels of emotional stress and being ready to respond to the uncertain conditions is one of the components of teacher resilience. For example, levels of emotional intelligence were found in educators who could sustain positive interactions with students and colleagues in the classroom despite of the existing technological crunches and organizational constraints of the institutions. This result supports scholars' work on the necessity to employ empathy in professional relationships for the preservation of the general satisfaction, with finding emotion understanding as essential for teacher's well-being (Gu & Day, 2020). Thus, educational institutions may have to provide resources for developing emotionally intelligent teachers or debriefing to improve teachers' levels of EI especially in areas of high stress and poverty.

Continuous Professional Learning and Self-Directed Growth

The second was a chronic learning theme that has to do with the use of continuing professional learning as a resilience model. Until the Covid-19 pandemic, few professional opportunities were available in Sindh, and; many of the teachers in Sindh initiated their professional development on their own, mainly in two domains, digital learning (Gunter & Thomas, 2020). This proactivity is also in line with the findings of other studies which also call for self-directed learning as one of the strategies that can help learners to overcome the constant technological change in learning (Schleicher, 2020; Gu & Day, 2020). In this case, educators' attempt to participate in various online courses, webinars and peer learning communities establishes a great deal of their endeavor to bridge the digital divide, as well as enhancing their teaching practices.

Notably, while the educators made no references to technical literacy as the key to resilience, they pointed to the value of learning across the life span. Thus, the desire to go on with the professional growth in the capacity of a teacher, even when working conditions seem unfavorable, speaks of the natural desire of many educators to stay relevant in a classroom context (Beltman et al., 2019). This suggests the need for advocates of school improvement to promote the culture of professional learning that may be lacking in areas such as Sindh and by extension other provinces as formal professional development may not adequately prepare teachers for this endeavor. Some developments include making the online training programs more affordable for all schools or creating forums where teachers can post and share the various ways that they can adapt their learning materials for online use.

Interpersonal Support and Collaborative Networks

Interpersonal relationships therefore played a significant role in this assessment of the educators' resilience in this study. Some of the participants stressed on the importance of Word of mouth, social networks where people turn to and share resources and support. This is in line with other self-archived studies which have established that social support is an essential element that promotes resilience (Beltman et al., 2019; Petrides et al., 2021). In specific, they can provide support and practical help especially in settings in which the formal networks institutional are not present (Sokal et al., 2021).

In particular, the use of collaboration cannot be overestimated regarding supporting educators' resilience in the context of Sindh where many of them report similar difficulties. Teachers are perceived to share similar fate hence they had unity of purpose which helped them overcome the hurdles of digital learning. These findings support Gu and Day (2020) work that posited that collaborative relationships act as the basis of resilience in learning environments. But at the same time, focusing on the informal peer networks in this study also indicates the lack of formal institutional support structures to complement the informal ones, and there must be more formalized structured programs to encourage collaboration and information exchange among the educators (Neff & Germer, 2021).

Adaptation to Technological Change

In this study, although technological adaptation was proven to be a concern for educators, the teachers who also embraced the concept of growth mindset overwhelmed the influence of digital disruptions. Some authors think that the teachers who are more ready to accept technology as a challenge and not as a threat for their teaching approaches where capable to respond quicker and more efficiently (Schleicher, 2020). As with prior studies on resilience, this finding points to the mindset as well as the willingness to embrace change as vital aspects (Petrides et al., 2021). Teachers who adopted the digital tools in a bid to provide the students with better learning experiences as well as outcomes where better placed to deal with new pressures of the digital change.

However, it is also important to understand that such an adaptation was a rather individual process because institutional endorsement and education were rather limited. Several teachers complained that they had no institutional training on how to adopt the new technologies into the classroom, and had to rely on own initiative and experience and looking into other teachers' practices (Mukhtar et al., 2020). What this implies is that though teachers have been found to be 'Anyway, educators can be quite resourceful and tenacious, their capacity to thrive in the light of technological advancement probably needs stronger institutional supports such as professional development and technological access.

Implications for Policy and Practice

The implications of the present study provide policy makers and practitioners several significant insights. First, educators and policy makers must acknowledge the significant position of resilience in maintaining teacher performance especially in a technological environment. Equipping educators with the right support and capacity that will enable them to build up their emotional IQ, skills, and networks of learning partnerships should be deemed paramount today (Gu & Day, 2020). There is also a need for schools to cultivate a culture of professional development for the teachers in the sense that the teachers are encouraged to actively look for the professional development opportunities and are assisted in the process of changing with technological advancement.

Further, there is a requirement of structural arrangements that necessarily respond to the contours of educational challenges in contexts such as Sindh. Although this study presents a picture of innovative individual teachers, it shows that current professional development is notably insufficient in terms of institutional support. I believe that one of the areas, where policies should be set, is digital environment should be developed through providing teachers and learners with access to good internet connection, computers and other digital resources needed; secondly, professional development should be offered particularly for teachers who work in rural and other hard-to-reach areas of the country and which are not well supplied with necessary resources (Schleicher, 2020)

Last but not the least, role of peer interaction cannot be ignored which one of the major elements of collaborative is learning. In this case, the following suggests that schools have an important role in supporting collaborative networks among teachers through facilitating professional learning communities, mentoring and peer support networks. These networking are not only helpful to get support in practical sense but they also build the communities and supports system for the teachers to cope with every time pressure and stress which is very important for the professional and personal sustainability of teachers described by Beltman et al. (2019).

Limitation and Future Research

It means that, this study has given useful information for analyzing the resilience of educators in Sindh but has certain limitations. The number of participants was small, however, so caution must be taken regarding generalizability of these results. As for the limitations of this study, the future research could generalize the sample of the educators to include the participants from different regions and educational settings. Furthermore, this research is devoted to identifying the personal strategies of educators in practicing resilience; therefore, further research can be expanded on the institution and system level.

Furthermore, longitudinal study could give more understanding on the change of resilience of educators over time especially with the use of technological advancement in education. Researching further about the effects of resilience in relation to teacher turnover, teacher satisfaction, and learners' achievements could also provide significant insights to the discipline.

Conclusion

This research offers meaningful understanding of the educators' responsiveness in Sindh, Pakistan in the context of digitization in education. The results highlight that resilience is not solely oriented at embracing new technologies, but is a cluster of competencies that include emotion intelligence, professional development, and interpersonal social capital. This study also found that educators in Sindh were highly resilient and innovative while teaching in the current lockdown, which required them to teach in an unprecedented online environment; in many cases, teachers had to turn to self-

learning and peer support to overcome all those barriers. However, the economic and institutional resources of the country being limited, these teachers effectively used ways and means to enhance their continuing professional teacher training practices and livelihood.

Finally, the study acknowledges the diverse elements of resilience showing how one needs to maintain healthy emotional resources, career adaptability and the role of support systems at work. These aspects play a role in the maintaining of the professional competence and the emotional state of the educators in the context of the growing use of the technology in the sphere of education. The findings from this research hold significant implications for schools and policy makers who are seeking to improve staff support processes as well as increasing the organizational readiness for change in schools.

Recommendations

1. *Enhance Emotional Intelligence Training*: Schools should ensure that organize professional development for teaching staff that addresses strategies of emotional intelligence. Teachers can effectively cope up with the pressure from distance learning through training in Emotion regulation, self-awareness and stress management (Tschannen-Moran & Hoy, 2021).
2. *Promote Continuous Professional Development*: Teachers need continued, high-quality instruction in technology integration and in general pedagogy, delivered by their schools in a regular basis (Timperley & Alton-Lee, 2020). This could include training sessions; online based courses; and webinars designed for needs of faculty in different settings (Gu & Day, 2020).
3. *Foster Collaborative Networks*: This is because institutions should promote and support development of peer support and Professional Learning Communities. These networks can serve important sources for knowledge sharing as to best practices, mutual support for stress relief or common for discussion goals that refer to digital teaching (Sokal, 2021).
4. *Increase Institutional Support*: This means that more efforts have to be made in ensuring institutional support with adequate digital resources extended to the intended utilizes. Currently, the reliable connection, modern equipment, and technical support are critical factors, which can help educators to make the proper use of digital tools in their practices (Schleicher, 2020).
5. *Encourage Self-Directed Learning*: Thus, educators should be encouraged to follow personal-driven learning activities. Schools could motivate or appreciate teachers practicing professional development learning outside practices (Mukhtiar, 2021).
6. *Strengthen Resilience Frameworks*: Teachers and institutions should ensure that they come up with the mechanisms for measuring stress, workload as well as work-life balance in schools (Johnson & Birkeland, 2020). Promisingly, such frameworks of goals can contribute to building a more sustainable and supportive delivering learning context for educators (Simpson & Borke, 2021).

Through the following recommendations educational institutions and policymakers will be in a better position to assist teachers in tackling the odds of the digital times thus enhance teacher welfare and the quality results.

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