Effect of Emotional Intelligence and Digital Pedagogical Skills on Remote Learning: A Cross-Sectional Study

By

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Abstract

Emotional Intelligence is a vital psychological construct useful for enhancing the digital pedagogical skills of school teachers. This study aims to investigate the impact of emotional intelligence and digital pedagogical skills on Pakistan's educational sector teachers. The sample size consists of 300 (male 47.3%) (females 52.7%) secondary teachers from the government (51.7%) and private (48.3%) Schools, participants were selected through stratified sampling, and a cross-section research design was used. Data were collected in the area of Central Punjab, Pakistan. Theories of Emotional Intelligence (EI) proposed by (Mayer and Salovey, 1997) were used as the theoretical background, and its relationship with the Digital Pedagogical Skills of school teachers was examined. All tools used in the study were constructed and standardized on the Pakistani population. The results indicated that Emotional Intelligence significantly impacts DigitalPedagogical Skills.Implications of the study for the training of teachers on Emotional Intelligence and DigitalPedagogical Skills were discussed.

Keywords: Emotional Intelligence, Digital Pedagogical Skills, Teachers.

Introduction

Pakistan is a country where the teaching profession is the last choice of occupation so generally, they are neither committed nor motivated to teach (MoE, 2009). Digital Pedagogy is not about using technology and tools; it is about using tools thoughtfully and deciding when not to use and paying attention to the impact of technology on students' learning. Several Pedagogical programs are being offered in Pakistan, but unfortunately, the desired results have not been achieved. The findings showed a poor induction of teachers, a lack of resources for the training of the teachers, demotivation among teachers, inadequate distribution of competent and productive teachers, and dual and infrequent training of the teachers (Farah, Fauzee & Daud, 2016). Jumani and Abbasi (2015) documented that teacher training programs in Pakistan face challenges concerning policies, quality, and fewer resources.In recent years, there has been

a focus on Digital Pedagogical Skills, and the training of teachers on these skills has become very popular in many countries.(Postareff et al., 2007). Teachers' education is not only the knowledge but also the skills that can impact the students and develop skills in them too. (Darling-Hammond, 2012). Usually, in universities, the subject experts are the most admirable quality; however, there is a discussion to improve the teachers' Pedagogical Skills. As a result of their training in the university, teachers have recently become very popular in many countries. (Postareff et al., 2007).

Emotional Intelligence (EI) has turned out to be a major developing research area in psychological, organizational, and educational fields. Teaching with EmotionalIntelligence has been recognized as now a day an emerging trend all over the world and in Pakistan too. Although the training of teachers is inflicted in Pakistan, there is always room for improvement. Developing Pedagogical   Skills with emotional intelligence prepares teachers to understand their profession more deeply. Researches are evident that emotions play a vital role in learning. The complex social interaction where technology cannot replace social and emotional skills is very necessary.Emotional Intelligence (EI) is also known as Emotional Quotient (EQ), which is a test score to measure EI (Goleman, 2996). An individual can perceive, understand, interpret, and respond to the emotions of others. It is the capacity to recognize, understand, manage, and express emotions. It provides the basis for social and emotional competencies that are integral to success at any job. It is said that the more complex the job is, the more EI matters. High EQ enables us to handle the challenges that we might come across. For instance, this type of intelligence helps us to think rationally without irritating our emotions, patience, and understanding. With the help of EQ, a person thinks before acting, practices good decision-making, and has some good interpersonal relationships. There are many practical examples of EI to improve the student experience and increase academic achievement. The active use of EI consequences the Pedagogical qualities, competencies, and teacher training and improves the skills and the system as a whole.

According to Powell and Kusuma-Powell (2013), emotionally intelligent teachers are more skillful in nurturing the students' learning desire, strengthening the student-teacher bond, identifying the combination of emotions and cognition in the learning process, and creating a learning environment that is safe psychologically and physically. A competent teacher always understands the motivation and behavior of their students to build a healthy, active learning environment and encourage social interaction (Bikatwar, 2014).At the same time, exhibit respect and appreciation for students while sharing their ideas and views (Roth et al., 2019).Teachers can manage their emotional intelligence in five ways: self-awareness, self-management, social awareness, self-motivation, and relationship management (Arifin, 2019).

Emotional awareness is to understand thyself and emotions for better decisions;
Self-Management is said to be self-control to adjust to the environment;

Social Awareness is described as understanding the other's emotions and behaving accordingly;

Relationship Management is managing conflicts to cope with relationships.

Literature Review

Emotional intelligence is the ability to know, understand, and effectively manage of emotions of self and others. In contrast, digital pedagogy is an advanced way of learning without needinga physical presence in a classroom but through online sources. The fact that

should be proved was digital pedagogical skills affect the academic success and motivation of students. Digital pedagogical skillsand emotional intelligence enhances the quality of teaching. For this purpose, the research investigates the teachers to prove the facts mentioned above, and the participants were 355 elementary school teachers, 177 males, and 178 females. Scales of EmotionalIntelligence and teaching styles were administered. The result showed that Emotional Intelligence is a significant factor in teaching styles that positively and indirectly affects the quality of education (Öznacar, Yilmaz, & Güven, 2017). The paper aimed to identify the EI and social media competency among teachers so that a competency model can be constructed shortly. A statistical approach of multi-regression was used to find better results. The finding identified a significant relationship between EI and social media competency in the superior performance of teachers (Kaur, Shri, & Mital, 2018).

The study was conducted among teachers to find the relationship between digital pedagogical skills and the emotional Intelligence of English Language teachers. The participants of the study were 149 females and 64 males. Reliable and valid scales were administered to participants. The results of the study indicated that demographic variables such as age, gender, and socioeconomic status significantly affect teachers' literacy skills but found no significant difference in emotional intelligence in terms of demographic variables. There was a negative relationship between digital pedagogy, literacy rate, and emotional Intelligence (Herguner, 2017). The recent study aimed to explain how EI influences intercultural competencies (IC), which may result in better implementation of online learning. For this purpose, reliable and valid scales were administered, and the results indicated a positive relationship between EI, IC, and online learning. If a person understands the feelings and emotions of self and others, he can improve learner engagement online and develop higher IC (Arghode, Lakshmanan, & Nafukho, 2022).

Digital Pedagogy framework

To develop Pedagogical students first,we need to be pedagogues. It means that teachers will be able to identify, use and select the appropriate technology that truly works for students and to be a part of Digital Pedagogy. As educators, we need to develop our Digital Pedagogical Skills. Common teaching techniques and practices are now far behind in the acceleration age of information and technology. It also described that it is impossible to separate the attributes of Digital Pedagogy into clear and set apart. All the components overlap with each other. Both components are important to upgrade students' thinking patterns and skills.
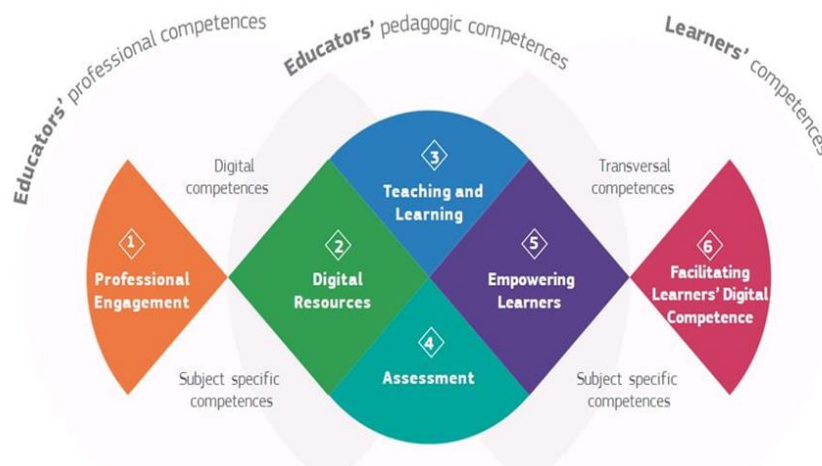
Figure 1. *The competence areas of the Digital Pedagogy framework*
(https://ec.europa.eu/jrc/en/digcompedu)

Mayer and Salovey's (1997) model of Emotional Intelligence
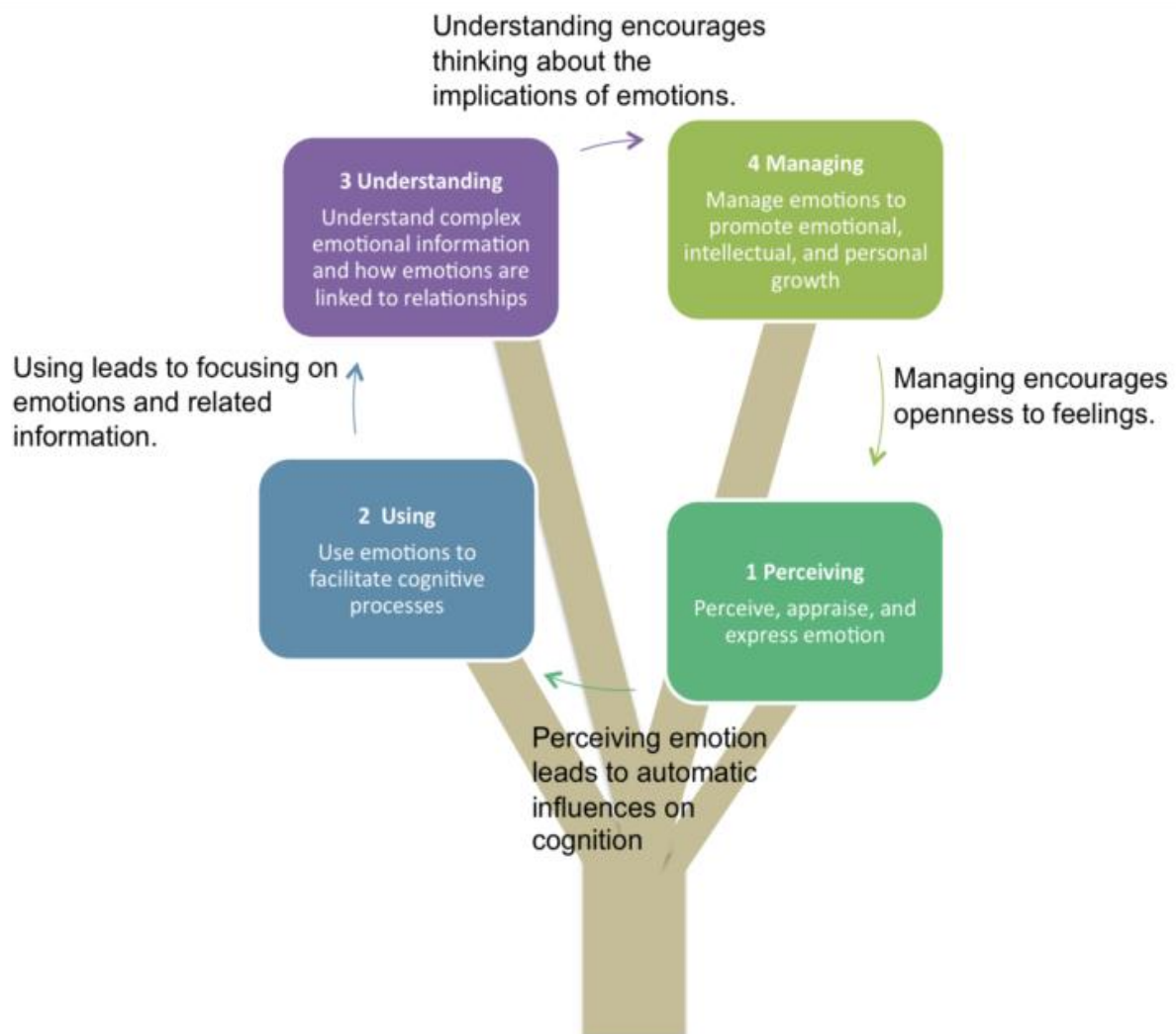
Figure 2: *Mayer and Salovey's (1997) model of Emotional Intelligence*

Salovey and Mayer first coined the construct of Emotional Intelligence. The initial definition of emotional intelligence is "the ability to understand one own emotion and feelings as well as others' emotions and feelings, to discriminate the emotions and use that information in guiding one's emotions and feelings." (Salovey & Mayer, 1990, p. 189).

The four-branch ability model:

The model of EI was introduced by Salovey and Mayer (1997), which got a lot of appreciation and was used in the foundation of different models of EI and measure. This model comprises different mental abilities such as appraisals, expression, regulation of emotions, and integration of emotional processes with cognitive processes, which is used to promote growth and achievement (Salovey & Grewal, 2005; Salovey & Mayer, 1990). The EI model comprises four stages according to the ability model, i.e., perceiving emotions, facilitating thoughts using emotions, understanding emotions, and managing emotions. (see Figure)

Perceiving Emotions:

It is the ability to identify emotions through attending to them, identifying one own physical and psychological states regarded as awareness of emotions, and sensitivity of emotions to self and others (Mayer, Caruso, & Salovey, 1999; Papadogiannis et al., 2009).

Facilitating thought using emotions

This step includes blending emotions to facilitate thoughts; it also involves analysis of emotions and processesof those emotions and then retention of emotional information, which is helpful in cognitive abilities and prioritizing emotions and feelings, reasoning, problem-solving decision-making king processes (Fiori and Mailifer, 2017).

Understanding emotions

It is the ability to assimilate the relation between different emotions and change emotions over different times and situations (Rivers, Brackett, Salovey, & Mayer, 2007).

Managing emotions

It involves the regulation of self and others'emotions successfully. It is the capability to process positive or negative emotionsin pertinent situations. (Rivers et al., 2007)

Method and Result

This study was conducted in 2021. The study was conducted after the approval of the Board of Studies and Institutional Ethics Review Board. A Quantitative method was utilized. Participants were selected through stratified sampling, and a cross-section research design was used. Data were collected in the area of Central Punjab, Pakistan. The sample was calculated. While calculating the sample size, we kept the margin of error at 5% and confidence interval (CI) at 95%, which gave a sample size of 300 Teachers. The multistage sampling technique was used as sampling was divided into 3 stages. In the first stage, stratified sampling techniques were used to divide the sample into 2 strata: one from the private sector and the otherfrom the government sector. They were further divided into 4 groups 2 other strata of male and female teachers inthe private sector and 2 further divisions of male and female in the government sector. In the third stage, they were further divided into sub-strata of 9th and 110th-grade schools. The sample size consists of 300 (male 47.3%) (females 52.7%) secondary teachers (grade 9th and Grade 10th) from the government (51.7%) and Private (48.3%) Schools in Pakistan.The sample was collected from 25 mainstream governments and private schools in Lahore (17 private schools, girls' and boys' branches, and 8 government schools, 4 boys and 4 girls'schools).

Table 1. *Number of participants with regards to education, subject, class, and sector (N=300)*

Demographic Variables	Categories	f	%
Gender	Men	142	47.3
	Women	158	52.7
Education	Masters	169	56.3
	Mphil	131	43.5
Subject	Arts Subject	158	52.5
	Science Subject	142	47.3
Class	9th	166	55.3
	10th	134	44.7
Sector	Government	155	51.7
	Private	144	48.0

Note. f= Frequency, %= Percentage

Table 1 indicated that more data were collected from females than male teachers. Most teachers' qualifications are a Master's, teaching to grade 9, and mostly completed their degrees in Arts.

Table 2. *Summary of Inter-Correlation, Mean, Standard Deviation of Digital Pedagogical Skills Scale and Wong and Law Emotional Intelligence Scale (N=300)*

Sr. No	Factors	01	02	03	04	05	06	07	08	09
01	PS	…	.70***	.58***	.90***	.27**	.30**	.20*	.28**	.33**
02	IS	…	…	.52***	.90***	.28**	.31**	.16	.29**	.31**
03	PS	…	…	…	.76***	.27**	.21*	.22*	.31**	.31**
04	PSS	…	…	…	…	.32**	.33**	.22*	.34***	.37***
05	OEA	…	…	…	…	…	.49***	.61***	.65***	.84***
06	ROE	…	…	…	…	…	…	.35***	.47***	.72***
07	SEA	…	…	…	…	…	…	…	.56***	.81***
08	UOE	…	…	…	…	…	…	…	…	.83***
09	WLEIS	…	…	…	…	…	…	…	…	…
14	M	37.14	40.14	24.50	101.77	21.47	20.38	21.58	21.97	85.39
15	SD	6.14	7.36	4.52	15.57	4.18	4.85	5.57	4.57	15.30

Note:***correlation is significant at 0.001 level. 1= Practical Skills, 2= Innovative Skills, 3= Personal Skills, 4= Digital Pedagogical Skills Scale, 5= Other's Emotional Appraisal, 6= Regulation of Emotions, 07= Self-Emotional Appraisal, 08= Use of Emotion, 09=Wong and Law Emotional Intelligence Scale, 14= Mean, 15= Standard Deviation. p<0.05*, p<0.01**, p<0.001*

Table 2: It was identified from the above table that practical, innovative, and personal skills are positively correlated with each other. It indicated that if practical skills increase, innovative skills and personal skills also increase. Furthermore, Digital Pedagogical Skills Scale positively correlates with emotional intelligence and subscale. It means that if Digital Pedagogical skills increase, emotional intelligence also increases.

Discussion

The current study aimed to determine the two goals first to determine the relationship between Emotional Intelligence and Digital Pedagogical Skills. There is a significant relationship between EI and Digital Pedagogical Skills among teachers and students (Bhuvaneswari, & Vijayakumar, 2021). Secondly, private school teachers have more Digital Pedagogical Skills and Emotional Intelligence than government teachers. Emotional Intelligence and Digital Pedagogical Skills are also required and valued as essential skills in the 21st century. The creativity involved cognitive variables, personal characteristics, education, and social and cultural elements. It is called a multidimensional construct. All dimensions are connected and interact concerning individual thinking and creative style. (Sternberg, 2010; Wechsler, 2008). There is a need for creativity in education. Teachers can play a vital role in understanding their own emotions and their students' emotions with their creative Digital Pedagogical Skills to enable them to understand and improve their learning. A comparative study was conducted between Iraq and the Czech Republic to discuss aspects of EI related to foreign language teaching and learning through online sources and regular classes. A cross-cultural study was conducted, and participants were asked to fill out a closed-ended questionnaire. The findings revealed that most Iraqi teachers found EI an important component in online learning and classroom management (Habeb Al-Obaydi, Pikhart, & Derakhshan, 2022).

In contrast, the Czech did not regard EI as a significant component of online learning (Habeb Al-Obaydi, Pikhart, & Derakhshan, 2022). The paper explores the effect of Emotional Intelligence in online learning and how it influences academic achievement. The result identified

that the development of emotional intelligence and resilience in the students increases the chances of academic achievement (Viscu, Cornelia-Ecaterina, Roxana, & Ioana-Eva, 2017).

To achieve the study's goals, a cross-sectional research design would be used to find the correlation between the variables. We found a high correlation between practical, innovative, and personal skills, which means the more practical skills, the more innovative and personal skills, and vice versa. It is also revealed that Digital Pedagogical Skills positively correlate with Emotional Intelligence. The more Digital Pedagogical Skills any of the teachers have, the more they will have Emotional Intelligence. Moreover, the teachers understand the emotions of themselves and the students so that they know how to use and when to use Digital Pedagogical Skills for their students, enhancing their learning capacity.The effect of emotional intelligence onteachers' online digital pedagogical skills and how it influences the students' learning. The result identified that the development of Emotional Intelligence and Digital Pedagogical Skills increases the chances of student learning. (Viscu, Cornelia-Ecaterina, Roxana, & Ioana-Eva, 2017).

To achieve the second goal t-test was used to compare Emotional Intelligence and Digital Pedagogical Skills across samples. Emotional intelligence has high significance inthe sector as a private school teacher has high Emotional Intelligence than government school teachers. Also, private school teachers have a higher understanding of others' emotional and self-emotional appraisal and use of emotions than government school teachers. The study is performed to unfold the relationship between emotional intelligence and E-learning during Covid 19 period. The results indicated a significant positive relationship among the abovementioned variables (Alam, Yang, Bhutto, & Akhtar, 2021).

Moreover, it aimed to find the difference between emotions in the real world and the digital world. The result indicated a significant relationship between teachers' and students' emotional intelligence and communication skills (Bhuvaneswari, & Vijayakumar, 2021). The study's results concluded a large predictive contribution to EI and readiness for e-learning (Buzdar, Ali, & Tariq, 2016).

Conclusion

This study provides a picture of Emotional Intelligence and Digital Pedagogical skills. This research shows how important it is to use Digital Pedagogical Skills in Government Institutes. After the pandemic, the whole world is now moving towards digitalization. It is the need of the 21st century to upgrade our teaching styles that enhance student learning and teachers' performance. Montelongo (2019) revealed that a lack of relationship building and the ability to engage learners increased learners' dissatisfaction.

Limitation and Suggestions

The results of this study cannot be generalized as the medium of studies is different at the Primary level. More research could be done to see the student's academic achievement and communication skills by using Digital Pedagogical Skills and Emotional Intelligence.

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