



Literacy in the Digital Age and Pakistani Youth

Ayesha Rehman	Assistant Professor, Department of Education, Lahore College for Women University, Lahore, Punjab, Pakistan.
Maheen Hashim Khan Burki	Department of Physical Education and Sports Sciences, University of Education, Lahore, Punjab, Pakistan.
Saima Khan	Department of Communication and Media Studies, University of Sargodha, Sargodha, Punjab, Pakistan.

Vol. 2, No. 4 (Fall 2022)

Pages: 260 – 272

ISSN (Print): 2789-441X

ISSN (Online): 2789-4428

Key Words

Technology, Digital Era, Pakistani Youth, Information Literacy, Digital Literacy

Corresponding Author:

Ayesha Rehman

Email: ayesharehman12@gmail.com

Abstract: Digital and information technologies are being extensively used in education, and the market for ICT-enabled education is expanding. In the present study the impacts of digital technology on the general ability of students (15–24 years old) to perceive knowledge has been explored. The current generation is highly technologically literate. The expansion of technology in education has been facilitated by recent technical advancements and the rise in literacy. The present study focuses on research objectives; to access the impact of digital technology on literacy among Pakistani youth, to address the scope of digital expertise to improve the academic learning among students, to examine the obstacles being posed by excessive exposure to digital technology in the promotion of literacy. Purposive sampling was used to draw sample from the population. The population comprised the students of B.S & M.S/M.Phil. A sample of 110 students (n=110) was selected randomly from 5 Universities and in-depth interviews were conducted to structure results of the study. Results of the study revealed that digital tools have significant influence on the perceptive skills. It enhanced the confidence level in youth by developing communication and research skills. Academic performance of the students has improved to an extent but certain consequences are needed to be reconsider to acquire the significant impacts.

Introduction and Background

Information and communication technologies (ICT) have progressively assimilated into our daily lives over the past ten years and have sped up social change by radically altering how people work, communicate, and access information, government/public services, education, and entertainment. A wide variety of services, administration, enterprises, and citizenship procedures are being transferred online more frequently. ICT are also seen as being integral to the reform initiatives required for the 21st century society (Jimoyiannis, 2015).

Digital skills have been acknowledged as one of the fundamental abilities for the workforce, lifelong learning, and active participation in

social and economic life by academics, researchers, educators, specialists, and politicians on a global scale. The main assertion is that individuals who can fully comprehend and use digital resources and tools effectively are significantly more empowered and favored in terms of their educational opportunities and success, career growth, career prospects, active citizenship, and many other aspects of their personal and social lives (such as public and social services, cultural and daily routines, online shopping, social networking, etc.) (Pawluczuk, Hall, Webster, & Smith, 2019).

In order to create possibilities and conditions for a "learning society" for everyone, ICT are

increasingly seen as a crucial aspect in promoting participation in education and lifelong learning. But at the other end, it appears pretty obvious that the number of online public, social, and government services may continue to increase. ICT may be able to meet older people's needs for constructive participation in contemporary society that is; easier access to social and healthcare services, contact with family and friends, avoiding exclusion, opportunities to contribute to political, communal, and social life in light of the rapid demographic changes in our modern societies for example, a rise in the number of older people (Meyers, Erickson, & Small, 2013).

However as society and technology have changed, so have the requirements for literacy in the twenty first century. Both young kids and adults need to gain knowledge, values, and a wide range of critical thinking, communication, and information management skills in order to be literate in today's media rich world. As a result, it is imperative to define digital literacy in ways that go beyond the straightforward association between using computers and the Internet (Eshet-Alkalai & Chajut, 2009).

In the late 1990s, Gilster (1997) popularized the idea of "digital literacy" by defining it in terms of education. He acknowledged the internet's inherent but revolutionary distinctiveness and described the digitally literate student as possessing a particular set of information skills (such as evaluation and searching) applied to text and multimedia content available on the internet and positioned in a formal, school-based learning setting. He pointed out that users now had new obligations as a result of having lightning-fast access to what seemed like an endless supply of concepts and knowledge. Digital literacy was clearly superior to traditional literacy skills like reading, writing, speaking, and listening from the moment it was first imagined. People may now create, work, share, socialize, investigate, play, cooperate, communicate, and

learn thanks to modern digital media and technologies (Gilster, 1997).

The ability of people to utilize, comprehend, and create with digital media is described by five interrelated components and dimensions. ICT literacy, often known as computer literacy, is the ability to use computers and software effectively as well as comprehend both their capabilities and restrictions. The ability of people to successfully use Internet resources and networked environments is referred to as internet literacy (Park, Kim, & Park, 2021). Examples of skills related to this dimension include navigation, sense of hyperlinking, orientation in the Web, access to and evaluation of Web resources, e-safety, etc. Information literacy is the capacity to locate, access, analyze, and produce information in order to successfully pursue one's personal, social, professional, and academic objectives (Rafferty, 1999).

The ability to comprehend visual design and information in a variety of visual formats moreover to manipulate and produce visual messages through objects, actions, or symbols using a variety of digital environments is known as visual literacy. Visual literacy is crucial for both learning and communication (Kędra & Žakevičiūtė, 2019). The ability to access, comprehend, critically assess, participate in, and produce media information and communications in a range of formats and circumstances is known as media literacy. It is important to take into account the media architecture and interfaces used to distribute content. The rapid development of Web 2.0 technologies over the last ten years, including blogs, wikis, media-sharing websites, podcasts, content aggregators, social media and networks, and social bookmarking, has improved the notion of media literacy. The term "literacy 2.0" refers to new ways of actively participating, expressing oneself, communicating, connecting, archiving, publishing, sharing content and knowledge, and collaborating (Bakbak, 2019).

Issues concerning not having access to the internet have given rise to worries of being "digitally illiterate," that is, lacking the knowledge, abilities, and habits needed to successfully navigate the constantly-evolving digital environment (Reddy, Sharma, & Chaudhary, 2020). Additionally, it is now widely acknowledged that all learning environments, formal and informal including the home and the workplace, are responsible for ensuring the preparation and ongoing updating of digital literacy skills, understandings, and practices for everyone from toddlers to seniors. Previously, it was thought that "the school's responsibility" was to prepare students to be digitally literate citizens (Cohen, et al., 2020).

pedagogical practices that distinguish formal education from other informal settings where people engage with digital technologies and literacy, such as the home, libraries, museums, zoos and aquariums, clubs, sports teams, and online communities, to name a few, are more important than the actual physical location of the school (Coiro, 2021). Refocusing attention on informal space is a result of a new emphasis on "life-wide" and "lifelong" learning, a method to expand understanding of learning beyond traditional classroom settings. These environments are sometimes described as "real-world" settings or "genuine contexts," although these terms often highlight the limitations, motivating difficulties, and inflexible discourses of formal educational institutions, which are stark contrasts to those found in school-based learning (Pangrazio, Godhe, & Ledesma, 2020).

Based on the era in which each generation was born, the generations are frequently divided into groups. Oblinger and Oblinger (2005) created a method of generational classification that divides people into Matures (1900–1946), Boomers (1946–1964), Generation X (1965–1982), and Gen-Y/Millennials (1983–1991). The overlap in years between classes, which is frequently noticed, is illustrated by this categorization. In their 2000 study, Howe and Strauss divided the

population into three groups: Boomers (1943–1960), Gen-X (1961–1981), and Millennials (1982–1994). However, students come from all generations, with the newest generation, known as the Gen-Z or Net generation, having quite diverse traits and expectations for education. The two generations that have had the biggest effects on schooling in the digital age are Gen Y/Millennials and Gen Z/Net Generation (Tutiasri & Febriyanti, 2021).

The millennial generation, often known as Gen-Y, includes students born between 1982 and 2000. They are frequently characterized as digital natives with a high level of technology literacy (Best, Buhay, McGuire, Gurholt, & Foley, 2016). The use of technology in education has increased as a result of rising student literacy rates and current technical advancements (Dewi, Febrian, Effendi, & Anwar, 2020). Generation Z (Gen-Z) is the generation that, in comparison to millennials, was born roughly between 1995 and 2010 (Rothman, 2014). With the development of the graphical web, which is similar to the Internet used today, and the emergence of mobile devices and cloud computing, Generation Z is unique. Social media is the preferred method of communication for this tech-savvy generation over face-to-face interactions. They are the first generation to be born in an integrated, internationally connected, and Internet-accessible environment. Gen-Z has a particular need to engage in learning because of their distinctive qualities. They prefer learning by doing over receiving instructions or reading text because they are kinaesthetic, experiential, hands-on learners. Additionally, they favor related activities, graphics first, and random access. It is clear that they have a desire for speed and immediate fulfillment (Philippas & Avdoulas, 2020).

The estimated population of Pakistan as of January 1, 2023, was 232.833 million people. When compared to the population of 228.038 million the year before, this is an increase of 2.10%. Calculations show that 88.3 million people, or

58.75% of Pakistan's adult population those who are 15 years of age and older, can read and write. As a result, approximately 62 million adults lack literacy. The population between the ages of 15 and 24 is taken into account while defining the youth literacy rate. 75.59% of youth nationwide are literate (Countrymeters, 2023).

Pakistan is still undergoing social change as a result of the increasing digital advances, despite the country's numerous economic and social issues. The information societies are growing as a result of the digital transformation. Examples include IT Policies, e-government, Wi-Fi services, and internet services, initiatives for e-learning, the telecom industry, and cellular mobile. Additionally, these digital innovations have changed behavior, notably with regard to learning. Pakistan has had access to the Internet since the early 1990s. One of the industries in the country with the greatest growth is information and communication technology (ICT) (Mirza, Pathan, Khatoon, & Hassan, 2021). In 2001, only 1.3% of individuals used the Internet. This percentage increased to 6.5% in 2006 and to 14% in 2012. In Pakistan, there are currently 56% of internet users, which translates to more than 124 million people using the internet. By the end of December 2022, Pakistan has 194 million active mobile customers. According to an industry representative, increased internet penetration benefits any nation's economy. Pakistan is advancing toward financial inclusion as a result of improved broadband (PTA, 2023).

It is asserted that students' Internet usage has a more profound impact on their attitudes. Age, year of study, and views about the internet are all associated with favorable attitudes toward blended learning, but no online experience or research program tends to influence students' choice of this method (Alzahrani & O'Toole, 2017). Additionally, it is established that kids who have access to the Internet at home exhibit significantly more positive Internet habits than students who do not. In Pakistan students' prior Internet usage, as well as the duration of their

usage, had a significant favorable influence on their attitudes about online learning behavior. As a result, student demographic factors frequently have a variety of effects on how students feel about using the Internet and using innovative teaching methods (Rehman, Hunjra, Safwan, & Ahmad, 2010).

There is little doubt that the traditional educational teaching paradigm is being tested by this new generation of learners. It's critical to design learning activities that fit the learning preferences and expectations of the next generation of learners. The learning repertory includes case studies, visual representations, simulations, and other participatory learning techniques like fieldwork. In addition, the utilization of simulation technology will assist in involving students in a process that gives them the involvement they want and the feedback they require in real world settings. Teachers can better fulfil the requirements of varied learners by offering flexible learning methods (Hashim, 2018).

Objectives

1. To access the impact of digital technology on literacy among Pakistani youth.
2. To address the scope of digital expertise to improve the academic learning among youth of Pakistan.
3. To examine the obstacles being posed by excessive exposure to digital technology in the promotion of literacy.

Research Questions

- RQ1. How digital technology affects a young Pakistani student's ability to perceive information?*
- RQ2. How the advancement in the technology in modern era is affecting the educational presentations of young students of Pakistan?*
- RQ3. What are the challenges encountered due to excessive use of digital technology by students in Pakistan?*

Review of Literature

There are many different definitions of literacy, and the variety is growing. The capacity to read and write is known as literacy, or simply “literacy” in English or “literate”. However, the definition varies depending on the source. For example, literacy is often referred to as the capacity to read alone, other times as the capacity to read and write, and less frequently as the capacity to read, write, speak, and listen. While The National Literacy Trust describes literacy as the capacity of people to read, write, talk, and listen with the intention of being able to communicate effectively with others and be able to grasp written information, there are various definitions of literacy that are less restrictive (Rintaningrum, 2019).

Furthermore, as Pekkolay (2022) implies if you apply it to the history of literacy that has been thoroughly discussed previously, you will see that each language-based activity that is part of literacy includes a component of meaning. People, for instance, have faith in a variety of natural events that professionals can study and write about. Because people continue to adhere to and practice a variety of established traditions, these readings and writings cannot simply be dismissed as myths (Pekkolay, 2022).

Brown and Bryan (2005) expressed their perspective on the use of technology to improve literacy. Some teachers fear that technological innovations will fundamentally alter how students learn to read, while others consider that technology is just a new tool that can be used in conjunction with traditional teaching strategies. The latter group sees technology as just one more instance of how education is like a pendulum that swings back and forth, rarely forging new paths. Similarly, some scholars contend that technology essentially redefines literacy while others think it serves as a means of reviving traditional notions of literacy (Brown, Bryan, & Brown, 2005).

New literacies connected to technology, however, have evolved recently. Digital literacy,

according to Gilster (1997), is the capacity to interact with a constantly growing online community to discuss problems, collect knowledge, and ask for assistance (Gilster, 1997). The ability to read, comprehend, respond to, and contextualize texts from a global viewpoint is often referred to as global literacy (Burniske, 2000). Information literacy, visual literacy, and technological literacy are further forms of literacy (Smolin & Lawless, 2003). In the aftermath of the technological revolution, it is evident that the concept of literacy has broadened and become more differentiated.

The use of digital technologies in youth employment was pioneered by extracurricular educational initiatives. Social media use, digital storytelling, and digital creation are now essential components of youth employment programs across Europe (Harvey, 2016). Young people are encouraged to actively and independently implement social change in a participative atmosphere that youth workers hope to foster. According to a study young digital citizens play a significant role in shaping the online environment and are information makers (Koh, 2013).

It is commonly known that the English curriculum must address digital literacies in the twenty-first century in order to be effective. There hasn't been a comprehensive study of English instructors integrating computer games into their teaching and learning through action research projects, despite studies in digital literacies looking at the integration of computer games in educational institutes. A study described the framework and development of a study investigating the application of video games in English courses. It was contended that studying computer games and young people's participation in online digital culture outside of the classroom may tell us a lot about the ways to teach both print and digital literacy (Beavis, Apperley, Bradford, O'Mara, & Walsh, 2009).

Both policymakers and educators support the crucial and difficult task of integrating new digital literacies into educational settings. In a case study, a 3D virtual environment was used to engage and inspire students in a rich, immersive online learning environment. The planning choices, early experimentation, and avatar interaction experience are crucial. Perceptions of students and teachers on using digital literacy and the way it relates to traditional classroom literacy practices showed the need of a broader understanding of the role of technology in literacy and contends that for teachers to react effectively to new digital literacies in the classroom, they need time for experimentation and professional development (Merchant, 2009).

The way that technology influences education is one area where it has had a significant influence on society. This makes learning more interactive and group-based, enabling learners to interact more effectively with the content they are learning and finding challenging. Additionally, it improves your access to resources. Since the invention of the Internet, we have had access to information around-the-clock, and you can find nearly anything online. Additionally, it makes it simpler for students to do their work. Exams and quizzes are easier for students to complete, and online instructors can be quite successful. By promoting independent study, it also expands the definition of a class. The instruction is accessible through social media and YouTube (Dilshad & Rafique, 2020).

Technology has become a significant part of teen popular culture as a result of how pervasively modern teens have incorporated new technologies into their life. Teachers have emphasized the potential of utilizing technology to improve students' language and literacy skills as well as their overall academic success. There is disagreement over the impact of technology on teenagers, and there is little literature that takes into account the viewpoints of urban and linguistically diverse students regarding the viability of integrating new technologies into the

teaching and learning of literacy in intact classrooms.

The use of technology in teen culture, for learning in general, and for literacy teaching in particular, was discussed from the viewpoints of urban teenagers in a research. The study found that urban teens predominantly and nearly entirely used social media and technology devices for peer socializing and they were interested in using technology to improve their reading abilities, but did not appear to willingly or autonomously integrate technology into learning, while 8th graders were significantly more sophisticated in their use of technology and their ideas for application of technology to literacy learning than younger ones (Li, Snow, & White, 2015).

According to a study, learners who utilized the internet more frequently had better test results and grades (Jackson, et al., 2006). The researchers conducted a second study in 2011 to examine the effects of technology and discovered that both the internet and technology use benefited children's academic performance and social behavior. They claim that the results of a study that looked at several parameters affected by technology found that children and females who used the internet more frequently read books more quickly than boys and kids who used it less frequently. Children who use their phones frequently were also found to have stronger social self-esteem than those who do not (Jackson, Von Eye, Fitzgerald, Witt, & Zhao, 2011).

In order to help children develop their reading skills, a study focused on the traits, relationships, and attitudes of parents and kids showed that through the use of technology, the learning activity could be customized, which increased the potential for participation and involvement. Children and parents started to learn from one another and through technology (Jeffs, Behrmann, & Bannan-Ritland, 2005). Technology used to facilitate literacy learning is useful for students with disabilities as well. In a study

researchers outlined TECH, a framework that teachers can use to choose, employ, and track technology's effects in relation to literacy goals. For a student with Asperger's syndrome, a struggling writer with learning impairments, and a student with Asperger's syndrome, the framework was demonstrated in action for mathematics vocabulary and reading comprehension skills (King-Sears, Swanson, & Mainzer, 2011).

A study focused on the way digitally exposed kids learn, the manner libraries are run, and student's academic interaction with emerging technologies. It was suggested that there is a substantial correlation between students' technological proficiency and their use of digital tools, use of database resources, and Web browsing of networked information. The correlation between universities and the hiring of designated instructors for digital literacy instruction, the introduction of ICT-based curricula, and the relationship between library administration and the maintenance of a regular digital literacy training programme showed a negative association. Additionally, it was evaluated that student exposure to digital technology is more of an encouraging element than a driving force in the development of technological competence. Moreover, using technology in libraries considerably enhances students' ability to learn using technology (Rafi, JianMing, & Ahmad, 2019).

The present generation of teenagers was raised in a technologically advanced society where everyone is constantly surrounded by electronics and digitalized gadgets. In a study by Kahlid B. et al (2019) investigated the academic and information literacy among the students Paistan mediated by video games. According to the study's findings, it is clear that playing video games helps young people learn and fosters rapid thinking. Participants put forth effort to accomplish goals, accept challenges for accomplishing certain points at various game stages, and engage with online rivals. It improved

their capacity for problem-solving, social communication, searching, detecting, and assessing (Khalid, Batool, Khalid, Saeed, & Zaidi, 2019).

Moreover, Hussain, Li and Alsanad (2022) assessed that information literacy abilities in the undergraduate students of Pakistan. They evaluated that in Pakistan understanding and experience of the students of undergraduate level in giving proper acknowledgment to original authors was extremely limited, as was their capacity to apply technological best practices in academic work and research. However, the students' proficiency with social networking platforms like Instagram, Facebook and LinkedIn was rather high. They supported the prominent involvement of university libraries in the educational process (Hussain, Li, & Alsanad, 2022).

Langarizadeh and Naghipour (2018) suggested that university students make a significant number of internet users, however despite the advantages and power of the internet, excessive use of it poses a danger to society, especially for children and young adults. Therefore their study's goal was to evaluate the way in which information literacy among students at Iran University of Medical Sciences in 2016 is related to internet addiction. It was concluded that the level of Internet addiction declines as information literacy increases, which also improves society's overall health (Langarizadeh, Naghipour, Tabatabaei, Mirzaei, & Vaghar, 2018)

Methodology

This study was carried out using the qualitative methodology. A phenomenological study was used to gather and examine students' opinions and viewpoints about how the use of digital tools are transforming the information perception of Pakistani youth and effects their literacy. This approach was chosen because it enabled the researcher to comprehend students' attitudes and perspectives in great detail as well as to

comprehend and describe each student's unique experience (Creswell & Poth, 2016).

Participants

The population was made up of Bachelor and master level students who were attending universities in the Punjab province of Pakistan. These universities include Punjab university (PU), Government College University Lahore (GCU), LUMS, COMSATS Lahore and UMT Lahore. Using purposive sampling technique 15 students were chosen as the sample. Purposive sampling, sometimes referred to as judgmental, selective, or

subjective sampling, is a sampling approach where the researcher uses his or her own preference when selecting members of the population to take part in the study (Black, 2010).

Data collection and Analysis

The qualitative study process included field notes and in-depth interviews, which were utilized to compare students' replies and draw conclusions. In order to allow for extra notes to be made while listening to and transcribing recorded interviews, they were taped.

Findings

Themes	Sub Themes
How do you interpret literacy in today's digitalized information environment?	Awareness Engagement of youth in digital practices
How can you communicate the knowledge gained or your own work by using online forums such as blogs or websites?	Management of information Communication of knowledge
How can internet improve your leaning and communication abilities?	Research Skills Communication skills
What effect does the use of tech gadgets have on your confidence and overall educational achievements?	Self-confidence Academic performance
What recommendations do you have for fostering information literacy?	Promotion of literacy Progressive measures
What do you think about the addictive use of technology? How is it affecting your education?	Mental and physical well being Time consumption Lack of focus
Can you provide some suggestions for how to overcome the obstacles to information literacy in modern era?	Time management Healthy routine

Q1. How do you interpret literacy in today's digitalized information environment?

Literacy is a mystery. While it is simple to agree that everyone should be literate, the discussion of what this entails and what the term "literate" actually means relies significantly on who is

having the conversation and what interests them. With the passage of time different types literacies have been evolved among information literacy and digital literacy are the most significant in navigating the overall ability of an individual communicate the information gained

in other formats such as writing, reading or electronically sharing in the modern era. We asked the university level young students (15–24 years old) about their perception of the term, various opinions were acquired. Some of the respondent stated that literacy is the ability of an individual to write and read, which the most common opinion is certainly. Majority of the individuals defined it as an ability of the person to gain knowledge or information and then transmit it in any form. Technology has changed the ways to access information. While a minority of respondents claimed that digital literacy is the study of information and communication technology, others defined it as the ability to utilize a computer, smartphone, and other electronic gadgets (ICT). When all the respondents were asked about the use of mobile phones and computer the response was positive. All of them were using mobile phones and computers even majority had been using them at early school age.

Q2. How can you communicate the knowledge gained or your own work by using online forums such as blogs or websites?

Learning management systems frequently make use of the adaptive communication tools known as online discussion boards. Students struggle with a variety of issues and lack guidance regarding the creation of more interactive forum environment. Majority of the participants responded that they are able to publish and share their work with others by the use of social media sites like Whatsapp, Facebook, Email or twitter. Availability of internet and use of smartphones and computers have enabled them to use social media sites for communication purposes. These sites are helpful in the distribution of information to the groups with many members in few seconds. Online forums promote a sense of belonging, promote connection among peers, and heighten student interest. Debate or reflective sharing during discussion can help students clarify and deepen

their command of important concepts. However, they responded negatively when asked about the ways through which they can interact with large community of learner such as participation in online forums, publishing in blogs or development of websites. They said that while they could readily generate audio and video files on their cellphones and share them with others, they lacked the necessary abilities to build websites from scratch using online tools.

Q3. How can internet improve your leaning and communication abilities?

It has occasionally been necessary for any learner to purchase physical copies of books, journals, or other publications for learning or in order to use them. Almost anything can be purchased digitally thanks to the internet as with just one click, search engines provide millions of results. When the improvement in learning skills was inquired they shared their experiences. They have enhanced our academic and research skills by practicing and studying a variety of books, papers, journals, and internet databases, respondents said. It was very beneficial for enhancing communication skills. Through Facebook, Twitter, Instagram, WhatsApp, YouTube, email, chat rooms, and other platforms, there are numerous methods to develop communication skills.

Q4. What effect does the use of tech gadgets have on your confidence and overall educational achievements?

Most students said that having a solid understanding of digital literacy gave them a platform to discuss various national and worldwide topics and events. Their degree of confidence increased as a result of interaction with various ethnic and gendered social groupings. The majority of curricular subjects offer opportunities for students to learn by making use of technology in order to improve comprehension and interest in the content.

Obtained marks or cgpa determines the performance of the students in the academic session. Most of the respondents denied the assumption that their marks depend solely on the information gained from digital skills. In fact the rate of success depends upon the syllabus of the subjects, completion of assigned work on time given by the professors and other academic activities. They claimed that students might earn high scores in their schoolwork by adhering to lecturers' instructions and recommendations. They added that the reason for their better grades was regular study sessions in the departmental library and teacher provided notes.

Q5. What recommendations do you have for fostering information literacy?

The most frequent response of the students was that teachers should encourage their students to become more proficient in digital skills, ICT literacy, and other study related programs. Through interviews, it was also learned that teachers need to help kids become more interested in the use of technology. Therefore, the institutions must work to remove barriers in learning and practicing knowledge gain after the professors have done their part. The majority of responders recommended raising awareness among the community's many ethnic groups. Universities should provide easy access to internet-connected devices with high-speed, free WiFi in order to promote literacy. They preferred that different workshops and seminars on digital literacy should be organized by the university's higher administration. Additionally, courses should be scheduled for lectures about the job. Online access to digital libraries is incredibly convenient for students and every educational programme should include a requirement for digital literacy.

Q6. What do you think about the addictive use of technology? How is it affecting your education?

Use of technology can be the start point for negative and unhealthy daily life. When the usage exceeds the certain time limit it becomes addictive behavior. When the respondents were asked about their routine they replied that yes technology can be addictive. Some time they forget about the main goal and get distracted. Time consideration does not remain the concern anymore. They shared their experiences like when they use computer or mobile to search for any topic their attention is diverted by many other entertainments offered online. In this way a lot of time is wasted without their knowledge. Mental as well as physical health is negatively affected. They feel depressed and isolated after exposure on social media for long durations. Long time screen exposure effects eyes. Many preferred video games than going outside and involving in physical sports.

Q7. Can you provide some suggestions for how to overcome these obstacles?

Majority of them responded that students of their age must learn to manage time. Addiction or excessive use can be minimized by involving in physical games like cricket, football, hockey or basketball etc. There must be check and balance of parents as well. Assigned academic work must be done with concentration and focus and before time. Involving in the healthy and physical activities with more face to face interaction instead of social media must be preferred.

Discussion

Digitalization and technological advancements has facilitated everyone and every field of life in current era. Today technological gadgets like smartphones, computers, and television has altered the perception of every individual. They are accessible and commonly used by the individuals of almost every age. Among them youth (15-24) has found them more interesting and they spent most of their time using internet, connecting socially by social media networks or

for learning purposes. Internet has enabled students to attain any information of their interest in few clicks or touches within no time. Pakistani youth seem to obtain higher level of perceptions towards information by the use of technology. They understand the use of digital tool to gain information they require and then to communicate it with other for learning. These advanced tools are effective in building their confidence and communication skills. Apart from the instructions and lectures receive from the teachers, relation knowledge gained through internet has facilitated them to score better in academics. Despite being an effective tool for learning and literacy technology has been companied by many challenges. The excessive use of internet is deviating the youth from the positive scopes it brings along with concerning health challenges as well.

Conclusion

The use of digital and information technology in education is extensive therefor, the need for ICT enabled education is growing. Mobile phones, TV and computer etc. are advance internet connected tool which help improve the information as well as digital literacy of Pakistani youth as the extensive use of these devices has been observed in them. Almost all college/university going teenagers carry smartphones and laptop. They have incorporated in the lifestyle become necessary for the academic purposes. Majority of the youth had higher level of perception to get information by using internet or any software. Their level of digital and information literacy has been enhanced. Interaction through online forums by chatting and sharing their self-created content with other member has developed communication, confidence and management skills. Qualitative data concluded that academic grades are solely associated with the assigned academic work and activities by the tutors and technology has insignificant role in this regard. Easy and quick availability to all type of

knowledge has posed some challenges for the students. Addictive behavior had the negative effect such academic failures due to wastage of time by engging in entertainment activities for longer time duration. Risks for mental health along with physical well-being are the most prominent challenge faced. Along with the emphasis to digitalize the education a need to overcome the negative and adverse effects of excessive use of technology must be overcome to promote constructive information literacy in the digital era.

References

- Aabo, S. (2005). The Role and Value of Public Libraries in the Age of Digital Technologies. *Journal of Librarianship and Information Science*, Vol 37 (4), 205–211.
- Alzahrani, M. G., & O'Toole, J. M. (2017). The Impact of Internet Experience and Attitude on Student Preference for Blended Learning. *Journal of Curriculum and Teaching*, Vol 6 (1), 65.
- Bakbak, D. (2019). Investigation into information literacy and the use of web 2.0 technologies in a faculty of architecture. *International Journal of Education and Practice*, Vol 7 (4), 418–429.
- Beavis, C., Apperley, T., Bradford, C., O'Mara, J., & Walsh, C. (2009). Literacy in the digital age: Learning from computer. *English in Education*, Vol 43 (2), 162–175.
- Best, L. A., Buhay, D. N., McGuire, K., Gurholt, S., & Foley, S. (2016). Mobile Computing and Wireless Networks: Concepts, Methodologies, Tools, and Applications. In *The Use of Web 2.0 Technologies in Formal and Informal Learning Settings* (pp. 1150–1172). IGI Global.
- Black, K. (2010). *Business Statistics: Contemporary Decision Making*, 6th edition. John Wiley & Sons.
- Brown, J., Bryan, J., & Brown, T. (2005). Twenty-First Century Literacy and Technology in K-

- 8 Classrooms. *Journal of Online Education*, Vol 1 (3).
- Burniske, R. W. (2000). *Literacy in the cyberage: Composing ourselves onlin*. SkyLight Training and Publishing Incorporated.
- Chase, Z., & Laufenberg, D. (2011). Embracing the Squishiness of Digital Literacy. *Journal of Adolescent & Adult Literacy*, Vol 54 (7), 535–537.
- Cohen, R., Parmentier, A., Melo, G., Sahu, G., Annamalai, A., Chi, S., & Santin, A. (2020). Digital literacy for secondary school students: using computer technology to educate about credibility of content online. *Creative Education*, Vol 11 (05), 674.
- Coiro, J. (2021). Toward a multifaceted heuristic of digital reading to inform assessment, research, practice, and policy. *Reading Research Quarterly*, Vol 56 (1), 9–31.
- Countrysmeters. (2023, January 6). *Pakistan Population*. Retrieved from Country meters: <https://countrysmeters.info/en/Pakistan#literacy>
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Dewi, V., Febrian, E., Effendi, N., & Anwar, M. (2020). Financial literacy among the millennial generation: Relationships between knowledge, skills, attitude, and behavior. *Australasian Accounting, Business and Finance Journal*, Vol 14 (4), 24–37.
- Dilshad, S., & Rafique, S. (2020). Adult Literacy and use of Technology: A case study of Pakistan. *EXLIBRIS SOCIAL GERONTOLOGY JOURNAL*, Vol 18 (1), 38–50.
- Eshet-Alkalai, Y., & Chajut, E. (2009). Changes Over Time in Digital Literacy. *CyberPsychology & Behavior*, Vol 12 (6), 713–715.
- Gilster, P. (1997). *Digital literacy*. New York: Wiley Computer Publishing.
- Harvey, C. (2016). Using ICT, digital and social media in youth work. A review of research findings from Austria, Denmark, Finland, Northern Ireland and the Republic of Ireland. *National Youth Council of Ireland*.
- Hashim, H. (2018). Application of technology in the digital era education. *International Journal of Research in Counseling and Education*, Vol 2 (1), 1–5.
- Hussain, B. A., Li, S., & Alsanad, A. (2022). Assessment of Information Literacy Abilities: A Case Study of Pakistan. *Sustainability*, 14 (7).
- Jackson, L. A., Von Eye, A., Biocca, F. A., Barbatsis, G., Zhao, Y., & Fitzgerald, H. E. (2006). Does home internet use influence the academic performance of low-income children? *Developmental psychology*, Vol 42 (3), 429.
- Jackson, L. A., Von Eye, A., Fitzgerald, H. E., Witt, E. A., & Zhao, Y. (2011). Internet use, videogame playing and cell phone use as predictors of children's body mass index (BMI), body weight, academic performance, and social and overall self-esteem. *Computers in Human Behavior*, Vol 27 (1), 599–604.
- Jeffs, T., Behrmann, M., & Bannan-Ritland, B. (2005). Assistive Technology and Literacy Learning: Reflections of Parents and Children. *Journal of Special Education Technology*, Vol 21 (1), 37–44.
- Jimoyiannis, A. (2015). Digital literacy and adult learners. *The SAGE encyclopedia of educational technology*, 213–216.
- Kędra, J., & Žakevičiūtė, R. (2019). Visual literacy practices in higher education: what, why and how? *Journal of Visual Literacy*, Vol 38 (1–2), 1–7.
- Khalid, T., Batool, S. H., Khalid, A., Saeed, H., & Zaidi, S. W. (2019). Pakistani students' perceptions about their learning experience through video games: A qualitative case study. *Library Hi Tech*.
- King-Sears, M. E., Swanson, C., & Mainzer, L. (2011). TECHNOlogy and Literacy for Adolescents With Disabilities. *Journal of*

- Adolescent & Adult Literacy*, Vol 54 (8), 569–578.
- Koh, K. (2013). Adolescents' information-creating behavior embedded in digital media practice using scratch. *Journal of the Association for Information Science and Technology*, Vol 64 (9), 1826–1841.
- Langarizadeh, M., Naghipour, M., Tabatabaei, S. M., Mirzaei, A., & Vaghar, M. E. (2018). Prediction of internet addiction based on information literacy among students of Iran University of Medical Sciences. *Electron Physician*, Vol 10 (2), 6333–6340.
- Li, J., Snow, C., & White, C. (2015). Teen Culture, Technology and Literacy Instruction: Urban Adolescent Students' Perspectives. *Canadian Journal of Learning and Technology*, Vol 41 (3), 1–36.
- Merchant, G. (2009). Literacy in virtual worlds. *Journal of Research in Reading*, vol 32 (1), 38–56.
- Meyers, E. M., Erickson, I., & Small, R. V. (2013). Digital literacy and informal learning environments: an introduction. *Learning, Media and Technology*, Vol 38 (4), 355–367.
- Mirza, Q., Pathan, D. H., Khatoon, S., & Hassan, A. (2021). Digital Age and Reading habits: Empirical Evidence from Pakistani Engineering University. *TESOL International Journal*, Vol 16 (1), 210–231.
- Pangrazio, L., Godhe, A. L., & Ledesma, A. G. (2020). What is digital literacy? A comparative review of publications across three language contexts. *E-learning and Digital Media*, Vol 17 (6), 442–459.
- Park, H., Kim, H. S., & Park, H. W. (2021). A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. *Journal of Data and Information Science*, Vol 6 (2), 116–138.
- Pawluczuk, A., Hall, H., Webster, G., & Smith, C. (2019). Digital youth work: youth workers' balancing act between digital innovation and digital literacy insecurity. *Information Research*, Vol 24 (1). Krakow: Proceedings of ISIC, The Information Behaviour Conference.
- Pekkolay, S. (2022). The Importance of Literacy. *Scholars Journal of Arts, Humanities and Social Sciences*, Vol 1, 6–8.
- Philippas, N. D., & Avdoulas, C. (2020). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance*, Vol 26 (4–5), 360–381.
- PTA. (2023, January 6). *Telecom Indicators*. Retrieved from Pakistan telecommunication Authority:
- Rafferty, C. D. (1999). Literacy in the information age. *Educational Leadership*, Vol 57 (2), 22–25.
- Rafi, M., JianMing, Z., & Ahmad, K. (2019). Technology integration for students' information and digital literacy education in academic libraries. *Information Discovery and Delivery*, Vol 47 (4), 203–217.
- Rehman, K., Hunjra, A., Safwan, N., & Ahmad, A. (2010). Students' attitude towards the Uses of Internet. *International Journal of Business and Management*, Vol 5 (6), 46–55.
- Rintaningrum, R. (2019). Explaining the Important Contribution of Reading Literacy to the Country's Generations: Indonesian's Perspectives. *International Journal of Innovation, Creativity and Change*, Vol 5 (3), 936–953.
- Rothman, D. (2014). A Tsunami of Learners Called Generation Z. *Maryl. Public Saf Online Journal*, Vol 1 (1), 1–5.
- Smolin, L., & Lawless, K. (2003). Becoming literate in the technological age: New responsibilities and tools for teachers. *The Reading Teacher*, Vol 56 (6), 570–577.
- Tutiasri, R. P., & Febriyanti, S. N. (2021). The Meaning of Millennial Generation Text: Reception Analysis of# KidsJamanNow. *Jurnal The Messenger*, Vol 13 (2), 162–178.