

Victoria Joseph \*

Najmonnisa Khan †

p-ISSN: 2663-3299

e-ISSN: 2663-3841

L-ISSN: 2663-3299

Vol. V, No. III (Summer 2020)

Pages: 21 – 33

## Digital Literacy Tools to Enhance English Reading and Writing Skills: A Detailed Literature Review

### Abstract:

*This study examines, explore and analyse the factors which enhance students' English reading and writing skills through digital literacy tools. Literature was reviewed to gather and select important research papers for this study, and the research articles reviewed were of the qualitative, quantitative and mixed-method in approach. Areas such as digital literacy tools, communication (reading & writing) skills, TPACK teaching model and socially shared cognition theory were given position. Digital literacy tools comprised of tablets, laptops, computers, digital interactive whiteboards, digital audiobooks, videos, smartphones and multimedia and so on. Vocabulary, phonic awareness, reading comprehension, reading fluency and reading with expression are of the factors of reading skills while grammar skills, spelling and vocabulary, writing simple and compound sentences, rearranging the jumbled words to correct sentences and writing paragraphs are the factors of writing skills. A conceptual framework (DLTCTC) was developed by the researcher while carefully exploring the literature.*

### Key Words:

Communication, Digital Literacy Tools, Effectiveness, English Reading, Fluency, Vocabulary and Writing.

### Introduction

Technology plays a major role in various fields such as education, health, media and entertainment and recent developments in the technological field is a new experience globally ([Irum, Bhatti, Mohammad & Dilshad, 2019](#)). Technology is an important concern in the teaching-learning environment as it has turned into a mechanism of transferring knowledge in the most appropriate manner to the students, teachers and all educators ([Grabe, 2007](#)). At the same time, technology problems become a major barrier for teachers in their teaching-learning process (Türel & Johnson, 2012).

Technology is not free from communication. Communication skills play a vital role in student life as they need to communicate either in oral or written throughout their life, like written assignments or giving oral presentations ([Iksan, Zakaria, Meesan & Osman, 2016](#)). Positive communication environment offers a forum for learners to learn how to communicate, and improve their communication skills ([Ihmeideh, Ahmad & Dababneh 2010](#)). Communication becomes so quick and inevitable with the most common technology tools, or resources includes video games, television, computers, tablets, internet, social networks, calculators and much more (Fatima, 2017).

Khan, Khan, Islam and [Khan \(2017\)](#) claim good communication skills of a teacher are the basic need of academic success of students, as the teacher communicates more instructions orally in the classroom to students. Poor communication skills of teachers may cause the failure of students to learn and promote their academics. The present education system in Pakistan do not offer modern teaching methods to teach English language in the classroom and only

depend on the textbooks as a teaching-learning resource ([Panezai & Channa, 2016](#)) while (Ahmad (2013) informs students lack in their communication skills such as English reading and writing as they are taught

\* PhD Scholar, Department of Education, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Karachi, Pakistan. Email: [victoria.v.joseph63@gmail.com](mailto:victoria.v.joseph63@gmail.com)

† Associate Professor, Department of Education, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Karachi, Pakistan.

through traditional teaching methods.

The English Language is considered to be very important in today's World, and it is the pathway to academic and professional success and socialization ([Shannon, 2015](#)). The English language is a second language in countries such as Malaysia, Pakistan, Saudi Arabia etc. and these countries are keen to implement English as the medium of instruction in their schooling/educational system in order deliver good quality education to its citizens ([Nunan, 2008](#)).

[Rashida, Cunningham, Watson and Howard \(2018\)](#) claim that out of seven thousand languages in the World; there are only limited digital content languages. Among these, English is the most common language used for most of the digital applications used by 26% of internet users worldwide (W3Techs, 2017). The digital tools available namely; desktop, laptop computer, tablets, iPad, android mobiles/ smartphones, an eBook reader (e.g. Kindle, Noodle) and other devices with internet access.

Sangra and Sanmamad (2016) expose that Information Communication Technology (ICT) assists in teaching-learning processes and has shown tremendous learning improvement. [Adeoye and Adeoye \(2016\)](#) debate that it is the fundamental right of every student to know the basic skills and awareness of digital technology as it has a greater impact on the whole education system. Khokhar, Gulab and Javaid (2017) state the Pakistani secondary school teachers do not have the expertise and the motivation to integrate technology in the teaching-learning process. Researchers [Bauer and Kenton \(2005\)](#) find teachers confident and skilful in using ICT but hesitate to integrate into their teaching process.

## Objectives of the Study

Integration of technology favors students to learn English language and therefore advised teachers to use the TPACK model created by [Mishra Koehler \(2009\)](#) to teach English ([Ali, 2018](#)). I C T integration is one of the main features in the National Professional Standards of teachers in Pakistan (NPSTP, 2009).

The study aims to conduct a critical and detailed literature review on the following aspects:

- Digital literacy tools and their effect on the communication skills of students
- Association between TPACK teaching model and socially shared cognition and how it affect students' communication skills.
- To develop a conceptual framework by merging TPACK and Socially shared cognition theory and content to enhance students reading and writing skills.

## Methodology

The purpose of the study is to search, read, explore, analyse and obtain a broader understanding of Digital Literacy Tools available through the lens of Literature Review and synthesizing it later. Research synthesis also enabled the researcher to categorize the areas of the study articles in topic or title wise to make a meaningful report at the end. The researcher intended to conduct a critical literature review on Digital Literacy Tools (DLT) and its effect on students' English Reading and Writing skills and so, the author divided the research into three sections such as researching articles on Digital Literacy Tools, TPACK teaching model and socially shared cognition theory. The researcher surfed multiple search engines to obtain relevant articles from Google, Google Scholar, Eric, Springer, JSTOR, Thomson Reuters, PsycINFO, APA PsycNet and Conference Proceedings. The search included research methods, digital tools, definitions, TPACK model and socially shared cognition theory. The first step was to surf around 150 articles and screened to the next step by selecting 60 of the studies according to priority and importance by reading the abstract.

**Table 1.** Division of Research Articles as Per Areas of the Study

S. No	Areas of the Study	Articles researched
1	English Vocabulary in reading	6
2	Reading comprehension	4
3	Phonic awareness	5
4	Reading fluency	6
5	Digital writing, writing paragraphs	4
6	English Grammar, spelling and punctuation	4
7	Comparing digital and traditional learning	4
8	Digital educational games	4
8	TPACK model	8
9	Socially Shared Cognition Theory	6
10	Research Methods/sample/data collection techniques	9
Total articles		60

## Results and Discussion

Above mentioned, ten areas of the studies were recognized through rigorous reading from the sixty research articles through internet search mainly from Google scholar and ERIC. The sixty journal articles were from Pakistan, Malaysia, China, Indonesia, UK, Egypt, China, USA, India and Tanzania (refer table: 1). A detailed description of the area of the study is reviewed and categorized under five different section. English reading, English writing, TPACK teaching model, socially shared cognition theory and research methods. The research instruments may include surveys questionnaires, in-depth interviews, focus group discussions, documentary reviews and pre-post questionnaires.

## Literature Review

### Digital Literacy and Historical Background

Digital literacy involves the usage of digital tools such as a computer, laptop, mobile phones and other technological devices in educational set up for the teaching-learning process. Digital literacy is evaluated by an individual's grammar, composition, typing skills and ability to produce text, images, audio and designs using technology (ALA, 2019). The arena of 'digital literacy' has a moderately long history. In 1969 John Debes offered a tentative definition for a concept he called 'visual literacy': Visual Literacy refers to a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences.

The concept of digital literacy was continued as till 1970 as technological literacy until the 1990s to be announced as digital literacy by Paul Gilster (Glistter, 1997). Initially, he clarified it as general, which is the ability to understand to use information from various digital resources otherwise use facts through technology. So it is like literacy in contemporary times. Digital literacy emerged from visual literacy, computer literacy, information literacy. Digital and media literacy includes the ability to examine and comprehend the meaning of messages, judging credibility, and assess the quality of digital work. A digitally literate individual becomes a socially responsible member of their community by spreading awareness and helping others find digital solutions at home, work, or on a national platform.

## Definitions of Digital Literacy.

- Literacy is the ability to read and write the ability to understand information however presented while Digital
- literacy is the ability to successfully and analytically direct, estimate and generate information using an assortment of digital technologies ([Lanham,1995](#)).
- Digital Literacy involves mastering ideas not keystrokes one way of distinguishing the increasing array of concepts of digital literacy is a list of specific skills and techniques that are seen as necessary for qualifying as digitally literate. (Paul Gilster, 1997).
- Digital Literacy refers to the more subtle and situated practice associated with being able to create understand communicate meaning and know the World in which these processes are increasingly mediated via digital technology (Futurelab,2010)
- Digital Literacy is the amount to a minimal set of skills that will enable the user to operate effectively with software tools or in performing basic information retrieval task ([Buckingham, 2015](#)).
- Digital literacy is the ability to navigate various digital platforms and understand and assess, communicate through them (Beth Handricks, 2018).
- Digital Literacy is the ability to make sense of concepts and ideas of reading and understanding, viewing or seeing, observing and perceiving, writing and creating or producing and being crafty or designing ([Heick, 2019](#)). Digital literacy is the ability to find, evaluate, utilize, share and create content using information technologies and the internet.

## Digital Literacy Tools and their Significance

Digital Literacy Tools (DLT) are effective resources such as laptops, smartphones, tablets or desktop computers, audiobooks, interactive whiteboard, digital libraries, digital dictionaries, multimedia which students and educators use to communicate, teach, express in the contemporary teaching-learning process ([Bartrop, 2018](#)). The DLT aids teachers to plan, organize, teach, motivate, encourage and initiate the students to engage during the teaching-learning process. Usage of digital literacy tools enhances students and educators' practical skills, research skills, assessing skills, critical thinking skills, communication skills, social skills, problem-solving and especially creativity ([Leah Anne Levy, 2018](#)). ICT is used for teaching writing effectively (Deor, 2012). DLT has brought welcoming changes for the students' learning, motivation, communication, reduced absenteeism, enhanced thinking and encouraged the introvert students to be more confident and communicative([Lee, 2000;mYoung, 2003](#)).

[Liu et al \(2002\)](#) inform DLT helped to improve learner's writing skills, learn more vocabulary and assisted in cultural exploration. [Kim \(2004\)](#) DLT have shown great improvement in critical thinking and changed the role of teacher to a facilitator or care and resource provider. DLT also supported teaching methods to improve cooperative and collaborative interaction which enhanced critical thinking skills among the learners and proved to be a learner-centred method of teaching (Hadad, 2003). [Rosen \(2010\)](#) states digital tools may enhance student's enthusiasm, interest, and becomes the student-centred method of teaching. DLT allows for exploration, experimentation, competition and co-operation ([Rosmalen and Westera, 2014](#)).

[Computer and laptops](#) helped to build vocabulary and improve advance literacy level and were found successful (Dalton & Crissham, 2010). Wordle DLT helps in creating an association between words and their meanings (Trelease, 2006). LCDs and Audiobooks were used to help slow learners to improve (Hermafustiana& Rusinawaty, 2010). Digital Audiobooks also enhance English reading fluency (Catalano, 2018). Computer Assisted Language Learning enhances phonic awareness (Thajakan & Sucaromana, 2014). Smartphones and Tablets found to be useful in teaching digital writing ([Choo & Li, 2017](#)) and digital interactive

whiteboards were widely used to teach grammar ( Purxwl, Buchnan & Fridrich, 2013), the video was of useful to practice dialogue and sentence construction (Outlay, 2013).

**Table 2.** English Reading Skill Researches

Author(s) & Year	Design & Method	Tool(s)	Sample	Variable(s)	Country
Rankin Gold Gooch, 2006	Quantitative research	Pre-post game questionnaire	5 ESL students	English reading proficiency & vocabulary	U S A
<a href="#">Pritchard &amp; O'Hara (2009)</a>	Mixed method Research	In-depth activities	14 middle school students	English Reading vocabulary	U S A
Thajakan & Sucaromana (2014)	Mixed method Research	Phonic test Semi-structured interviews	50 Grade I Students	English Reading Phonic awareness	Thailand
<a href="#">McNaught&amp; Lam 2010</a>	Qualitative research method	Wordle & focus group surveys	K9 & K10 students	English Reading comprehension	China
<a href="#">Mohamed 2018</a>	Quantitative Research method	LCT	88 EFL Students	English Reading fluency & listening comprehension	Egypt
<a href="#">Bango Shah Soomro Lashari 2018</a>	Qualitative research method	Observation tools	7 classrooms	English Reading skills	Pakistan
<a href="#">Rashid Cunningham Watson Howard, 2018</a>	Quantitative research method	Digital practices survey	319 UG/PG students	Communication skills	Pakistan
<a href="#">Abbas Hussain Rasool 2019</a>	Mixed method researches	Semi structured interview and surveys	800 students	English reading skills	Pakistan

### English Reading, Digital Tools and the Factors

The English reading skills reviews comprised of research articles of mixed research methods, qualitative approach and quantitative methods. Samples of the research articles covered ESL students, middle school students, grade I students, 9K, XK students, EFL students and postgraduate students and the sample size ranged from five to eight hundred. The research instruments used were the pre-post game questionnaires, semi-structured interviews, focus group discussions, classroom observations, surveys and digital practices surveys. The objectives of the researches include reading proficiency, vocabulary, and phonic awareness, reading comprehension, communication and reading skills. Reading fluency is a critical skill and is considered to be the junction between vocabulary and the text. It can be achieved through Digital Literacy Tools such as computers or tablets enhance reading fluency among the learners ([Erten, 2018](#)).

Reading helps to nurture mind, emotions and psyche, allows the person to learn many things new in life.

English reading skills may include vocabulary, phonic awareness, reading comprehension, reading fluency and reading with expression and English reading develops creativity and imaginations (Sharma, 2014) The higher the knowledge of vocabulary the better the reading skills, furthermore vocabulary is the primary

component of English reading ([Nation & Coady, 2009](#)). Reading fluency is a very important part of reading comprehension as readers who spend their time decoding words tend to lose the understanding of what is being read ([Erten, 2018](#)).

Wordle is an application which assists in thinking the meaning, importance, relationship of the word (Trelease, 2006). Teaching through technology using the PowerPoint motivates students when teachers use visual teaching aids such as laptops, computers, LCDs to incorporate videos in the lesson. Teachers can use Audiobooks for the learning weakness students (Hermafustiana & Rusinawaty, 2010). A digital tool such as Multimedia glossary using a PowerPoint template boost the vocabulary and comprehension skills of students ([Pritchard & O'Hara, 2009](#)). Teachers used visual teaching aids such as laptops, computers, LCDs to incorporate videos in the lesson (Hermafustiana & Rusinawaty, 2010).

Multimedia and Computer-Assisted Language Learning (CALL) was initiated to enhance phonemic awareness. Thajakan and Sucaromana (2014) integrated CALL for phonic awareness with a multimedia presentation using text, videos, sound and animation and therefore stress on multi-dimensional CALL. Through phonic awareness, reading fluency, great vocabulary, and reading comprehension strategies can be obtained to improve reading skills (Ehri et al., 2001, Kamhi & Catts, 2012).

Raig and Patten (2007) relate the technological tools or the instruments have proven results to assist or help students to develop oral interaction skills by enhancing the vocabulary, improve reading comprehension. Digital Audiobooks are the fastest emergent design in the digital World (Catalano, 2018). Study with upper elementary students on Digital audiobook had shown greater improvement in reading fluency among the students and audiobooks assisted readings impacted on the reading fluency of slow learners (Moats, 2011). Audiobooks enable to absorb the text, to know the plot and to listen to the fluency model (Carbo, 2017).

**Table 3.** English Writing Researches

Author(s) &Year	Design &	Tool(s)	Sample(s)	Variable(s)	Country
Ilin, Kutlu 2012	Action research	Repertory grid	4 A Level Students	English grammar	Turkey
Purcell Buchanan & Freidrich, 2013	Quantitative	Survey questionnaires	Middle school students	English writing	U S A
Amiri & Sharfi 2014	Experimental	Open-ended questionnaire	80 grade III students	English writing	Iran
Varzanch Baharloo 2015	Experimental	Oxford Placement Test OPT	120 female ESL high school students	Creativity & thinking	Iran
<a href="#">Montrieux Vanderkubde Scgekkebs &amp; Marez 2015 Rana Asghar, 2018</a>	Qualitative	Group interview	40 students and 20 teachers of secondary school	Teaching- learning	Belgium
Choo & Li 2017	Qualitative	Essay writing assignments	34 BBA/BSCS students	Writing	Pakistan
<a href="#">Dahraj Manzoor &amp; Tufail, 2020</a>	Quantitative	Group interview	8 students teachers	English writing	Malaysia
	Quantitative	SEET online survey	200 undergraduates	English writing	Pakistan

### Writing in the English Language with DLT

English writing skills reviews involved researches such as action research, experimental, qualitative and quantitative in nature and were conducted in Turkey, USA, Iran, Belgium, Malaysia and Pakistan between the years 2012 to 2020. The sample size ranged from 4 to 120 and involved school students, teachers, undergraduate students and lecturers.

Writing is an important part of students' activity. Teachers have to integrate technology while teaching writing to students. Technologies such as smartphones, tablets and computers have attracted students to learn writing through them. Digital writing helps the students to improve their writing skills and to disperse their views, opinions, ideas, suggestions, dreams and perceptions to their peers or friends. Malaysian teachers' encouraged students to be collaborative and motivate in writing essays through digital writing (Choo & Li, 2017). Mohammad Reza Ahmadi (2018) clarifies electronic teaching programs have become the predominant preference of instructors since they arguably boost positive student engagement with teachers and incentivize overall English language learning.

### Digital Interactive Whiteboards (Electronic whiteboards)

Interactive whiteboards are of very useful for collaboration and students engagement in class. 52% of the teachers in Malaysia admitted that students improve writing by teaching through interactive whiteboards. The digital tools stimulated the students' superior writing habits (Purcel, Buchanan & Fridrich, 2013)

### Using videos for English Grammar

Grammar is very important in the process of writing. Saeedi and Biri (2016) inform us teaching grammar through video, which has both audio and visual effect for the learners. Videos are culturally bound and generate curiosity among the learners to think. Videos are very useful in offering real-life scenes or situations which are connected to daily life than a mere classroom environment. By watching videos, students learn the sentence pattern, grammar and so on. Videos can be played often to hear and practice dialogues. Watching videos had improved students grammar skills (Kutluay, 2013 & Mohammad, 2013).

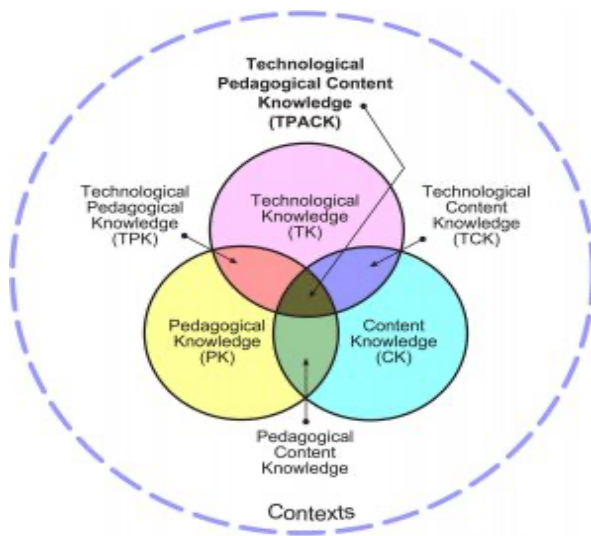


Fig 1. TPACK Teaching Model by Mishra and Kohler (2009)

Table 4. TPACK Model of Teaching Researches

Author& Date	Research TYPE	Title	Sample	Setting	Objective
Mishra& Koehler 2006	Quantitative	Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge	Students and teachers	Columbia University USA	To explore the connectivity between content and technology

Author& Date	Research TYPE	Title	Sample	Setting	Objective
Xiaoyang Shu 2012	Action Research	Action research on TPACK influence on teachers of National Open University: Exemplified with an English teacher of Zhejiang Radio and TV University	English teacher	China	To improve on the teachers' knowledge system and teaching ability and to enhance the professional development of teachers
Anderson, Barham & Northcote 2013	Qualitative	Using the TPACK framework to unite discipline in online learning	lecturers	University of Newcastle	To measure the practical issues about using the TPACK framework as a tool to view online teachers knowledge about pedagogy, technology and content
Hasniza Nordin 2014	Case study Qualitative	Pre-service Teachers TPACK and Experience of ICT integration in schools in Malaysia and New Zealand	Pre-service teachers	Malaysia and New Zealand	The manner in which the pre-service teachers experience and develop their ICT knowledge and skills with TPACK to improve their pedagogy
Yin Ya Li 2020	Quantitative	TPACK Status and development strategies of secondary school teachers under the background of internet + education.	Middle school teachers	China	To improve teachers information literacy from the opinion of teacher education
Qing ZHANG 2019	Mixed method	Technology-enhanced instruction and English Teachers TPACK	English teachers as a foreign Language	Wuhan, China	To measure the relationship between TPACK theories and teachers' TPACK and improving the TPACK level of foreign Language Teachers
<a href="#">Bibi &amp; Khan 2017</a>	Quantitative	TPACK in Action: a Study of a teacher educator's thoughts when planning to use ICT	Teachers	Pakistan	A new approach to understanding how teachers TPACK looks when they use various domains of knowledge
Xiuzhen Xie 2018	Qualitative	Research on College English TPACK Framework Teaching from the Perspective of Connectionism	Teachers	China	To use modern educational technology equipment to encourage college English teaching
Pappas, Giannakos & Jaccheri 2016	Quantitative survey	Investigating factors influencing students intention to dropout computer science studies	C S students	Norway	To examine how the students intention to finish their studies in computer science

### TPACK Model Researches and the Factors

TPACK stances for Technological Pedagogical and Content Knowledge. TPACK model of teaching journal

articles from the years 2006 to 2020 was reviewed, and the teaching model was applied in quantitative, qualitative and mixed methods of researching by the researchers of USA, China, Pakistan, Norway and New Zealand. Samples of these studies were teachers. Mishra & Koehler (2009) studied about TPACK with the teachers to explore the connectivity between content and technology. Xiaoyang Shu (2012) declares TPACK improves on the teachers' knowledge, system and teaching ability to enhance the professional development of teachers. Anderson, Barham & Northcote (2013) declare that TPACK is a tool to view online teachers' knowledge about pedagogy, technology, and content was a success. Hasniza and Nordin (2014) claim the study on TPACK teaching model revealed the experiences of teachers' pedagogical skills.

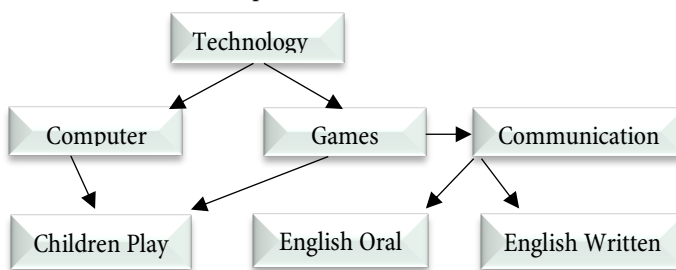
[Baran & Thompson \(2011\)](#) inform TPACK framework assist teachers to integrate technology into the subject matter or content and teaching methods in a classroom. The combination supports the learners to get the concept and learn more efficiently. Mishra and Koehler (2009) recommend that TPACK could also guide curriculum development and educational guidance to the teachers. TPACK also transforms the manner in which the teachers plan their daily lessons, planning process to choose the learning outcomes, the content, activity, type of pedagogy and choose technologies that will support the activity type that aid the students in learning. TPACK framework allows us to create and develop the overlapping knowledge to make the best learning environment for our students. With the increasing focus on technology, teachers must also learn how to combine technology with content and pedagogy to create an effective learning environment ([Bibi & Khan, 2017](#)).

### Theoretical Background of Digital Literacy

Digital literacy theories are theories which involve student-centred approach which offers collaboration, engagement and learning achievements for learners ([Lynch, 2018](#)). Digital learning theories allow educators to use and integrate technology into the teaching-learning process. There are many theories such as socially shared cognition theory, the theory of RAT, constructivism, social constructivism, behaviourism, transformative, activity theory, transactional distance theory, cognitive theory of multimedia learning, Piagetian theory, situated cognition, distributed cognition and socially-shared cognition, transactional distance theory, transformative learning theory and connectivism ([Rice, 2009](#)).

### Socially Shared Cognition Theory (SSCT)

SSCT specifies that it does not limit to one person thought or brain or mind rather to a sound relationship between cognition, social relationship and responsibility towards a given task with the thinking process where brain or mind (cognition) is used ([Resnick, 1991](#)). This theory at some level focus on Vygotsky' social constructivist approach but emphasizes on the individual development in the context of social interaction as the primary unit of this is the social interaction through which an individual' cognitive development takes place (Shegloff, 1991). Chiu, Hsu and Wang (2006) enlighten about the virtual aspect of SSCT, it has been extensively practised in the information systems with validity as it deals with human interactions in triadic, dynamic and reciprocal of individual beliefs, behavior, specific character and the social connections they work in.



**Figure 2:** Socially Shared Cognition Theory by Shannon Doak (2009)

Socially Shared Cognition Theory (SSCT) is one of the theories of digital learning theory. This theory confirms that technology plays a vital role in sharing cognition among the learning community. This begins with educator engaging students to play computer related games to learn communication (Doak, 2009).

In SSCT, the students experience all the activities together, and so the learning occurs socially. (Brown & Cole, 2000, p. 198). The students learn new skills by playing computer games which directly leads to communicating with one another, and it also enhances critical thinking, collaboration and coordination, problem-solving and decision making skills (Honey, et al, 2003, p. 9) Socially shared cognition theory involves collective regulatory processes, cognition, personal beliefs goal setting, motivation, decision making and metacognition (Winnie, Hadwin & Perry, 2013). SSCT allows the group members to collectively regulate their joint effort on a given work. (Volet, Summers, & Barcia, 2011).

### Proposed Conceptual Framework of Digital Literacy Tools and Communications skills by the researcher

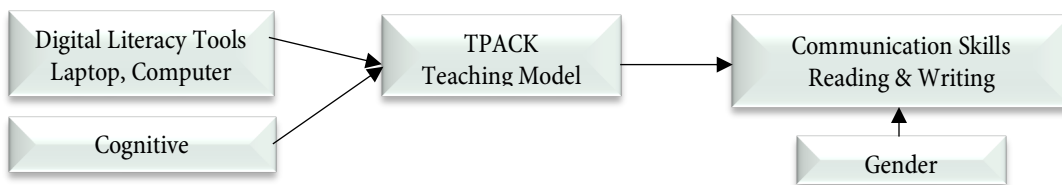


Fig 3. Digital Literacy Tools Cognitive Tpack Communication Framework

The above shown conceptual framework DLTCTC is the combination of Digital Literacy Tools (DLT), Cognitive and TPACK model of teaching to enhance the communication skills of students. Teachers use Modern digital tools such e-books, audiobooks, laptops, computers, multimedia, smartphones, interactive whiteboards, e-dictionary, animations and 3Dmodels in a stimulating or motivating learning environment with fun activities along with TPACK model to teach students to be engaged and participative. Learners and the teachers collaborate both physically and virtually through audio, video, online, games and text chat to participate in English reading and writing during the teaching-learning process. Teachers can also assess quickly, accurately and generate results on the presentation and other assignments done by the students. DLTCTC framework can cater to the 21<sup>st</sup>-century learners' English reading and writing skills.

### Challenges

Digital literacy tools require knowledge of how to use technology for research purpose, reading, and writing and so on (Kochhar, Bryant & Heishman, 2010). Students and teachers in the Focus Group Discussion revealed difficulties faced in the e-learning as they could not participate in the quiz or discussions and there were many disturbances and difficulties during e-learning (Hamanto & Purwanti, 2019).

### Conclusion and Recommendation

Digital literacy tools are of the blessing to the developing countries like Pakistan, where advancement is constantly happening. DLT such as computer, laptops, tablets, smartphones, multimedia and e-books can be used for teaching English reading and writing. It is stated that if the schools have technological facilities, then it should be used by the educators to bring positive progress in the teaching-learning process. DLT certainly aides in collaboration, critical thinking, creativity and communication. With the help of TPACK teaching model along with socially shared cognition theory and DLTCTC Framework (Joseph, 2020), teachers can make a difference in the teaching-learning process by engaging learners, creating interest and to enhance English reading and writing skills. Digital Literacy Tools are highly recommended in primary, secondary, higher secondary and university level of education.

## References

- Abbas, Q, Hussain, S., & Rasool, S. (2019) Digital Literacy Effect on the Academic Performance of Students at Higher Education Level in Pakistan. *Global Social Sciences Review (GSSR)*, IV(1)154 – 165.
- Adeoye, A. A & Adeoye, B. J., (2017). Digital Literacy Skills of Undergraduate Students in Nigeria Universities: *Library Philosophy and Practice* journal.
- AlDahdouh, A., Osório, A., Caires, S. (2015) Understanding knowledge network, learning and connectivism, *International Journal of Instructional Technology and Distance Learning*, 12(10)
- Ali, Z., (2018). Are We there Yet? Technology Integration in English Language Teaching in Baluchistan, Pakistan.: Research Gate
- Bango, Z., A., Shah, Z., A., Soomro, A., H., & Lashari, A., A (2018). A Qualitative Study of Teaching and learning of L2 Reading at High School in Pakistan <https://www.researchgate.net/publication/329829158>
- Baran, E., & Thomson, A. D., (2011). TPACK: An emerging research and development tool for teacher educators: *Turkish online Journal of Educational Technology*: ResearchGate.
- Barltrop, M (2018) Digital Literacy Tools: An Introduction: <https://whatbinder.com/2018/05/28/digital-literacy-tools-introduction/>
- Bauer, J., & Kenton, J. (2005). Toward technology integration in the schools: Why it isn't happening. *Journal of Technology and Teacher Education*, 13(4), 519–546.
- Bibi, S., & Khan, S. H (2011). TPACK in Action: A Study of a teacher educator's thoughts when planning to use ICT: *Australian Journal of Education Technology*: 33(4).
- Brown, K., & Cole, M. (2000). Socially Shared Cognition: System Design and the Organization of Collaborative Research. *Theoretical Foundations of Learning Environment* (pp. 197-214). *New Jersey: Lawrence Erlbaum Associates, Inc.*
- Bryant C. K Hashman. A (2010) Effective collaboration for educating the whole child: *Research Gate*.
- Buckingham, J. (2015). Defining Digital Literacy: *Nordic Journal of Digital Literacy*. 10.
- Choo & Kee Li L (2017). Digital Writing in English Language Writing Instruction ARIEL *An International Research Journal of Language and Literature*. 28, 1-16.
- Dahraj, M, T. Manzoor, H & Tufai. M., (2020). Use of Digital Technological Tools among Undergraduate English Language Learners in Pakistan *International Journal of English Linguistics*, 10(4).
- Doak, S. (2009). Emerging Theories of Learning and the Role of Technology: *The EduTech*.
- Erten, I, H. (2018). Role of Vocabulary in Teaching Reading: *Wiley Online Library*
- Government of Pakistan. (2010). National Education Policy. *Islamabad: Ministry of Education*.
- Grabe, M., & Grabe, C. (2007). Integrating technology for meaningful learning (5th ed.). *Boston, MA: Houghton Mifflin*.
- Hasnia & Nordin (2014). Pre-Service Teachers' TPACK and Experience of ICT integration in schools in Malaysia and New Zealand: *UC Research Repository*
- Heick, T. (2019). 4 Principles of Digital Literacy: Teach Thought we Grow Teachers.
- Ihmeideh, F. M, Omari, A. A. Dababneh, K. A., (2010). Attitudes toward Communication Skills among Students' Teachers' in Jordanian Public Universities. *Australian Journal of Teacher Education*. 35(4).
- Iksan, Z. H., Zakaria, E., Meerah T. S. M., & Osman, K (2012). Communication Skills among University Students: *Procedia-Social and Behavioral Sciences*. 59, 71 -76
- Irum, S., Bhatti, T., Mohammad, N. & Dilshad, M. (2019). Integration of Technology in the Classrooms at University Level in Pakistan: Perception and Practices Analysis. *Indian Journal of Science and Technology*. 12(25).
- Khan. A., Khan, S., Islam, S. Z & Khan, M (2017). Communication Skills of Teachers and Its Role in the Development of Students Academic Success. *Journal of Education and practice*. 8(1).
- Khokar, S. J., Gulab, F., & Javaid, S (2017) Information Communication Technology Integration: Trained Secondary School Teachers' Dilemma: *Research Gate*

- Kim., K.T.,( 2004). The Structural Relationship among Digital Literacy, Learning Strategies, and Core Competencies among South Korean College Students. *Educational Sciences Theory and Practice*.
- Kutlu, L. & Kutluayc. A.( 2012)\* An action research: Using videos for teaching grammar in an ESP class *Procedia - Social and Behavioral Sciences*.70, 272 – 281.
- Lanham,R (1995). Defining digital Literacy: Digital Literacy. *Scientific American*: Computer Greek
- Lee., & Young.,(2003). Digital Diversity: Youth, Equity, and Information Technology: *Wilfrid. Amazon.com*
- Levy, L, A. ( 2018) 7 Reasons Why Digital Literacy is Important for Teachers: *Digital literacy Myths USC Rossier*.
- Lint, K. (2017) The effects of using digital tools to support writing in the ELL classroom. *University of Northern Iowa*.
- Liu, Y. (2017) A Review of the Relationship between TMT Shared Cognition and Strategic Decision Making. *American Journal of Industrial and Business Management*, 7, 1101- 1110. doi: [10.4236/ajibm.2017.710078](https://doi.org/10.4236/ajibm.2017.710078).
- Lynch., M.,(2018). What Are The Opportunities And Challenges Of Digital Learning? *Advocate*.
- McNaught., C., & Lam.,P., (2010).Using W Using Wordle as a Supplementar dle as a Supplementary Research Tool: TQR . *Where the World come to learn Qualitative Research*. 15(3)
- Mishra, P., & Koehler, M. J. (2009). Technological pedagogical content knowledge: A framework for integrating technology in teachers' knowledge. *Teachers College Record*, 108(6), 1017–1054
- Mohammed.M.,M.,K (2018)Using Audiobooks for Developing Listening Comprehension among Saudi EFL Preparatory Year Students: *Journal of Language Teaching and Research*. 9( 1), 64-73
- Montrieux H, Vanderlinde R, Schellens T, De Marez L (2015) Teaching and Learning with Mobile Technology: A Qualitative Explorative Study about the Introduction of Tablet Devices in Secondary Education. *PLoS ONE* 10(12): e0144008. <https://doi.org/10.1371/journal.pone.0144008>
- Nation, & Coady (2009). Graded readers and vocabulary. *Reading in a Foreign Language*, 12(2), 355-380.
- Nunan.,D,(2008). The Impact of English as a Global Language on Educational Policies and Practices in the Asia-Pacific Region: *Teachers of English to Speakers of Other Languages, Inc. (TESOL)*
- Panezai,S.G. & ,(2016 ) .Pakistani government primary school teachers and the English textbooks of Grades 1–5: A mixed methods teachers'-led evaluation: *Journal of Cogent Education*. 4(1).
- Pritchard.,R & O'Hara, S., (2009). Stanford University California State University, Sacramento Vocabulary Development in the Science Classroom: Using Hypermedia Authoring to Support English Learners *The Tapestry Journal*: 1( 1).
- Purcel.,K., & Buchanan.,J., & Friedrich.,L.,(2013). The Impact Of Digital Tools On Student Writing And How Writing Is Taught In Schools: *Pew Research Center*|; *Internet And Technology*.
- Rana.,N., & Asghar.,(2015) Diffusing ICT to Enhance Students' Academic writing Skills : An experimental Study at a Business Institute in Karachi, Pakistan: *International Journal Of English And Education*.4 (3)
- Rashid., U.,Cunningham B ., & Watson ., C Howard (2018) .A Revisiting The Digital Divide(S): Technology-enhanced English Language Practices at a University in Pakistan: *Australian Journal of Applied Linguistics*. 1 (2) 64-87
- Resnick, L. B & Levine., J.M. (1991). Shared cognition: Thinking as social practice. *American Psychological Association*. <https://doi.org/10.1037/10096-018>
- Rice., K., (2009). *Theories of Educational Technology*!: EduTech BOISE Sate Universtat.
- Rosen.,L.,(2010).Teaching the iGeneration: *Educational Leadership*.68
- Rosmalen, P., Westera, W., (2014) Introducing serious games with Wikis: empowering the teacher with simple technologies, *Interactive Learning Environments*. 22(5)
- Shannon.S., ( 2015) Digital Literacy in the Classroom: Teachers' Attitudes towards Technology and the Language Curriculum Ontario Institute for Studies in Education of the University of Toronto.

- Winnie, P.H., Hadwin, A. F., & Perry,N.E.( 2013) . Metacognition and computer-supported collaborative learning. In C. Hmelo-silver, A, O' donnell, C. Chan, & C.Chinn (Eds), *International handbook of collaborative learning*:New York: Taylor & Francis.
- Zeeshan,M Zaidi,N.A (2017).Challenges of Teaching English Language in a Multilingual Setting: An Investigation at Government Girls Secondary Schools of Quetta,Baluchistan, Pakistan.: *Semantic Scholar*. 7 (4).
-