Post-Covid Language Teaching-Teacher as a Techno-Pedagogue

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Abstract: With the advent of digitalization the whole world has seen a technological boom where bodily presence becomes unnecessary and e-platform works as a representative for transferring messages, ideas, thoughts etc. This wind of machinery approach encompasses the educational arena as well. In Covid 19 situation when the total education system has collapsed, institutions have been closed near about for three to four months the necessity of technological skills of the teachers have come to the forefront because online teaching happens to be the only way now for imparting knowledge. This study was done to review the journey of the language teachers from pedagogy to techno-pedagogy and also for assessing the importance of technological as well as pedagogical skills of the language teachers by taking interviews of 50 language teachers online and also by analyzing the existing reviews. Some probable measures were also suggested here for the development of a language teacher from an expert of Pedagogue to Techno-Pedagogue and the importance of Techno-pedagogy in Covid 19 situation.

Index Terms:

Post-Covid, Language Teaching, Teacher, Techno-Pedagogue.

INTRODUCTION:

 From the ancient time in the whole world 'Teacher' or 'Guru' was considered to be the most learned and knowledgeable person in the society. Today also teachers are regarded with utmost love and respect. System changes with the flow and flux of time. From Gurukul system of age old tradition nowadays classroom transaction in the form of individual as well as group teaching prevail in the society. So though the place and mode of transaction change their structure, teachers also have to change their way of teaching. Dissemination of knowledge towards students has got a new dimension. The 2D teaching with printed media or books change its proceedings with the advent of technology or digi media. Computers, laptops, projectors, smart board are nowadays the most effective instruments of the education system. The pedagogical (coming from two Greek words- 'Paidos' referring 'Child' and 'Agogos' indicating 'Guide' in a nutshell means a teacher) comprehension of teachers has now turned into Technology related pedagogical knowledge known as Techno-Pedagogical Skill. Today in Covid 19 pandemic situation when the education system has got a hard blow due to complete lockdown, the necessity of Techno-pedagogical skill comes to the forefront. To teach any subject the uses of technology with pedagogical analysis of a particular part becomes a must to do job for the teachers as the face to face transaction now changes its existence from classroom to online platform. A language teacher should not get a different entity. Hearing, Speaking, Reading and Writing-these four basic skills of languages should be incorporated within the students by the language teachers. So besides knowing pedagogy about their own concerned language the usage of technology to transact their own pedagogical knowledge to the students become a very essential part. A language teacher should be well aware to transact all the pedagogical issues with the proper application of technology. So it can be said that 'The role of the instructor together with the role of the technology can lead to advanced learning results.'(Sudhakaran, N.2018)

STATEMENT OF THE PROBLEM:

The problem of the present study was stated as-

Importance/Role of a Language Teacher as Techno-pedagogue in Covid 19 Situation.

OBJECTIVES:

i) To comprehend the journey from Pedagogy to Techno-pedagogy.

ii) To analyse the importance of Techno-pedagogical skills in language teaching in Covid 19 situation.

iii) To ascertain probable measures for the development of the Techno-pedagogical Skills of the Language Teachers amidst Covid 19.

RESEARCH QUESTIONS:

i) What were the changes that occurred during the change over process from Pedagogy to Techno-pedagogy?

ii) To how far extent the Techno Pedagogical skill was important in language teaching in Covid 19 situation?

iii) What were the possible ways for the enhancement of the techno-pedagogical skills of a language teacher in Covid 19 situation?

DELIMITATIONS:

i) The study only dealt with Techno-pedagogical skills of a language teacher.

ii) The study was concerned with language teachers only.

iii) This research was for giving probable suggestions only but did not deal with any practical measurement.

SIGNIFICANCE OF THE STUDY:

In the situation of Covid 19 pandemic, education system is under the threat of heavy breakdown. The schools, colleges and other educational institutions have been all closed since the Month of March and the whole system becomes topsy-turvy in the face of uncertainty. Online Teaching is the only blessing of modern technology. So a teacher has to be technologically well equipped so that he/she can use it with his/her own pedagogy. So this study wanted to assess the importance of Techno-pedagogical skills of a language teacher which would help them to transact their teaching following the path of pedagogy as well as technology.

OPERATIONAL DEFINITIONS OF THE TERMS:

Post Covid 19 Situation-

It is a disease caused by a new strain of Corona virus. 'Co stands for Corona, VI stands for Virus and D stands for Disease.' This particular illness was named to as '2019 Novel Corona virus or 2019 nCoV.' Societal distance or bodily distance now becomes the only way to get rid of that. So face to face education transaction system has now switched over to online education system.

Language Teaching-

Teaching of language generally concerns with four skills-Reading, Writing, Listening, Speaking. Here language refers to the native language or any foreign languages needed to be learnt by a learner at school level.

Teacher-

A teacher is regarded as a person who blesses the students with the showering of knowledge and truth. He/she become the friend, philosopher and guide in every aspect of the journey and make the life worthy. A language teacher immerses the students in situational learning roles where the object has to learn, to converse, read, write and even learn in a language other than their native one.

Techno-pedagogue-

Pedagogy generally refers to 'The method and practice of teaching, especially as an academic or theoretical concept.' It is regarded 'as an Art and Science of Teaching.' The addition of the word Techno with Pedagogy refers to the use of technology in pedagogy and as the teachers are generally assigned to such works, they are referred here as Techno- pedagogue.

REVIEW OF LITERATURE:

Shyamlee, S. (2012). In the paper discussed about the use of Technology in the teaching learning process for nearly two decades by the use of email, Blogs, CALL, Power Point etc. Thakur, N. (2015) discussed in his article about the use of Technology with Pedagogy together so that the students became well aware about the use of technology in 21st century. K.K. Sibichen. (2016) described in his study about the importance of Techno Pedagogical Skills of a teacher and how the technological skills of a language teacher reflected its effects on the teaching learning process. Ahmadi, M. (2018) made a literature review on the use of technology in learning of English Language as second or foreign language and suggested some measures for its development. Patel, D. (2018) discussed in her paper how the language teachers created an opportunity for the students for meeting 'English Language Literacy Goals' in TELL or 'Technology Enhanced Language Learning' classroom environments. A. Alqahtani (2019) defined the use of technology in English Language

Teaching and how the application of this technology made advancement in contemporary English Language Teaching method. McFadden, C. (2019) described in the blog how teaching learning of languages became useful and interactive through the use of Tech-media and how the learning experience could be personalized. Ali, W. (2020) discussed in his article about the importance of readiness of the staffs, accessibility of students and confidence of the teachers for the successful employment of technology in teaching and learning process. Isaeva, R. (2020) propounded in his article about the importance of using technology in Covid 19 situation in modern educational system and how the universities of educational institutes of Azerbaijan tried to cope up with the new system. Patrinos, H. & Shmis, T. (2020) in their blog wrote about the importance of technology for mitigating the impact of Covid19 situation on the educational scenario of Central Asia and Europe.

METHODOLOGY:

This particular study was a kind of Qualitative work completed with the help of Interview of 50 language teachers of Kolkata region on their views of importance of teachers' Techno-pedagogical skill in pandemic and post pandemic situation and research analysis was done based on existing study on that matter.

POPULATION:

All the language teachers of Kolkata region were taken as Population.

SAMPLE:

Non-probability Sampling technique especially Snowball Technique was used to collect the Samples and Interview through Google Meet was taken of the 40 language teachers of Kolkata region taken as sample. Also research analysis was done on the existing research reviews.

DESIGN:

An interview with open ended questionnaire was taken from 50 language teachers through Google Meet platform. The area of the interview was consisting of some questions about their opinion of a teacher's role in covid19 situation as a tech expert in pedagogical transaction. The interview encompassed zones like-

i) Proficiency in Linguistic Abilities

ii) Aptitude to Develop Teaching-learning Process

iii) Ability to Improve Multi-media Based Study Materials

iv) Capacity to Design Multi-grade Instruction

v) Talent to Plan Specific Pedagogy

vi) Supportive in Distance Education Through e-learning

vii) Guide and Counsel for Career Options

viii) Ability to Stimulate Self-learning

ix) Improve Enrolment and Examination Process

x) Assist in Research Activities

xi) Competence to Reinforce for Cognitive Learning

➢ Talent to plan specific pedagogy
➢ Supportive in Distance Education through e-learning
➢ Guide and Counsel for career options
➢ Ability to stimulate Self Learning
➢ Improve enrolment and examination process
➢ Assist in research activities
➢ Competence to reinforce for cognitive learning
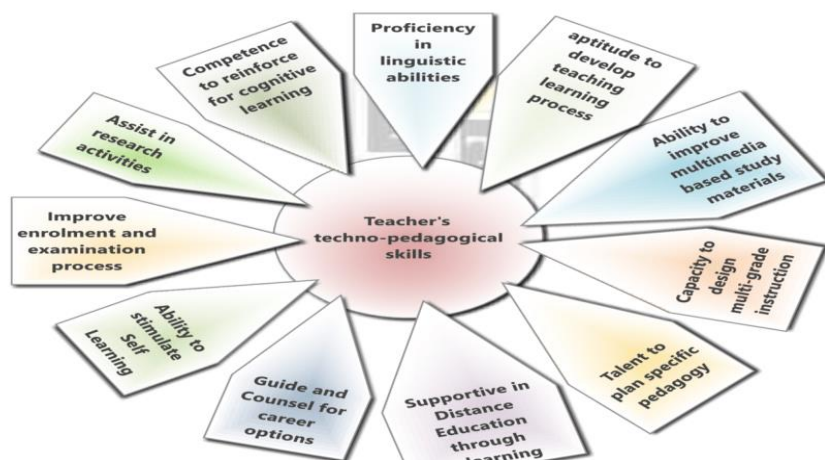
Teachers' Techno-pedagogical Skill, Sana,et.al.(2018)

INTERPRETATIONS:
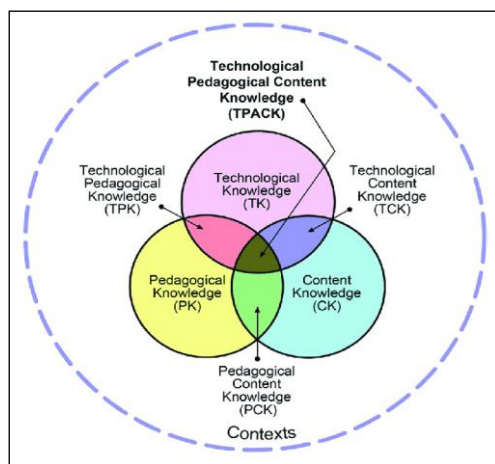
Research question-1

A change over process from Pedagogy to Techno-pedagogy-

Modern education system is very much accustomed with the term Pedagogy. Taken as an academic discipline the term Pedagogy is the study how knowledge and skills are imparted in an educational context, and it considers the interactions that take place during learning. It is often described as an act of teaching. In ancient Indian education system, in Ashrama or in gurukul generally lecture method or oral transaction was followed for the dissemination of knowledge from guru to his disciples. Education was restricted to only a particular class of people inherited generationally. Vedic hymns and Vedic texts were regarded as the only source of knowledge. Transformation of age old tradition from generation to generation was the key feature of the then education system. In Medieval period education was totally restricted by religion and proper knowledge was suppressed under the burden of virtue and vice. But everything must have to change with the flow and flux of time. With the advent of cognitivism, Behaviourism, Constructivism Education system changed a lot. Furnished in the hands of Pestalozzi the Pedagogic concept of Education came to the forefront. From teacher centralism there was a shift over to student centralism. This new concept in education gave birth to new learning theories and ideas and there came the concept of Art and Science of teaching known as Pedagogy. 'The emphases on teachers' subject matter knowledge and pedagogy were being treated as mutually exclusive' (Shulman1986). He believed that teacher education programs should combine the two knowledge fields.

In 21st century with the advent of Technology a new wind came in the arena of educational field. Only pedagogical skill in classroom application got is completeness with the aid of technology. Digital expertise has not included itself in the small corpus of IT Professionals rather the teachers of this digitalized era has to cope themselves up with the knowledge of pedagogy as well as Technology and to apply both of the skill simultaneously. The usage of this particular skill is not limited in classroom transaction rather in covid 19 situation the importance of this skill gets its platform. Though Science teaching is generally based on technology, Language teaching also has to transact itself through the digi platform of Techno-pedagogy with the help of an expert known as Techno-pedagogue. Sudharkaran, N (2018) described the usage of technology oriented teaching for English Language Teaching. Use of e-learning materials, Electronic Dictionary, online Teaching –learning material became very important tools for techno-pedagogical teaching learning activities. Basilaia, G. & Kvavadze, D. (2020) studied about the improvement in teaching learning atmosphere with the advent of the e-learning sources like Google Meet, Zoom and also described the importance of teachers pedagogical skill in this respect.

Techno-pedagogical skills are generally the extension of Shulman's Pedagogical skill with the addition of Technology. The areas or skills it covers within its own arena are-

The Dimensions of Techno-Pedagogical Content Knowledge Approach
(Koehler, M.J., & Mishra, P., 2009)

Research Question 2
To how far extent the Techno-pedagogical skill was important in language teaching in Covid 19 situation?

Covid 19 condition in India as well as in the whole world has brought a dramatized change in each and every sector including India also. Prevailing chalk and talk method of transaction has changed to a virtual platform where physical distance remain the key point to be safe and healthy. With the cognitive theory development there came many concepts of acquiring Languages. How we imitate, experience, accumulate our knowledge based on these develop our language. Language Teaching is concerned with 4R's.

LANGUAGE SKILLS

Input   Output

Listening   Reading   Speaking   Writing
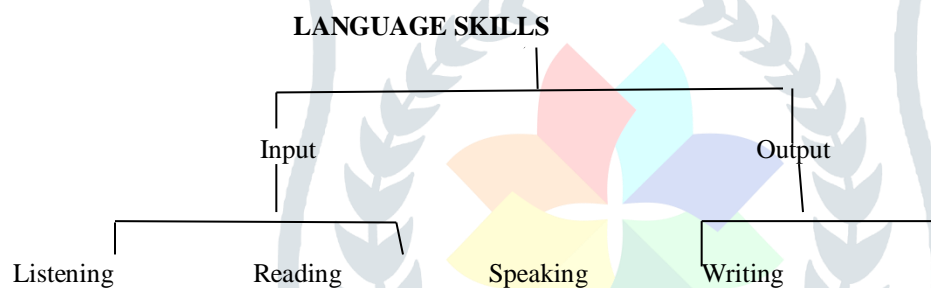
A teacher has to develop within the students these four R's….Reading, Writing, Listening and Speaking known as the basic skills of language. In such pandemic situation as no classroom teaching learning is available, a teacher has to create these four basic skills within a student through the use of technology.

Listening Skill Development in the assistance of technology-

i) On-line Lectures for students while having an online class.

ii) Online Broadcasting

iii) Using CD Rom while teaching and also ask the students to be habituated with the use.

Reading Skill Development with the assistance of Technology-

i) Program based on Computer Reading

ii) Personal usage and direction of using e-dictionary

iii) Advise to get accustomed with e-newspaper reading

iv) Knowledge of using Multi-media Software.

Speaking Skill Development in the assistance of technology-

i) Organization of Online Debate

ii) Voice chatting through Interaction Mode

iii) Convening a digi-seminar with students

iv) Arrangement of Virtual Online Conference

Development of Writing Skill through technology-

i) Creating and Sending e-mail

ii) Text Chatting through Internet

iii) Online Creative Writing Competition for Students

iv) Online blog writing on various Educational and Societal Issue.

Albirini (2004) made a study in Syria on the high school Language teachers' attitude towards Technology. It focused on teachers own view on the importance of Technology and cultural and demographic condition of a school to achieve the successful technology integration. Mishra, B (2014) in his study discussed about the use of technology in teaching English Language in an innovative way through the use of Radio, T.V., Projector, Mobile and overall with the help of a new technique called Advertisement. You tube can be a great source of teaching where vocabulary can be developed by 'Code Mixing' and 'Code Switching' like 'Have a Break, Have a Kitkat.', 'What an Idea Sirji!'. Mixing of different languages started to be existed in Advertisement like 'Yeh Dil Mange More.' Kulandaitheras, A. (2017) in an article regarding the barriers of language proficiency discussed about the importance of using Technology in collaboration with pedagogy. S.L. Pradeep (2018) made a sociological research to know about the techno-pedagogical skills of the Hindi teachers of Kerala and as a result of the research he found the low level of techno-pedagogical Skills and discussed about the possible ways for the enhancement of the process. Sudharkaran, N (2018) discussed in her study about the usage of technology in English language teaching as Second Language in India. A teacher would have to be well aware of all the necessary skills of using technology in English Language Teaching.

The data collected from the interview of 50 language teachers revealed their opinion about the importance of techno-pedagogy in such a pandemic condition. Sumdog, Seneca Learning, twitter Page, Zoom App, Google Meet these were regarded as good platforms for online teaching and learning situations. Developing vocabulary and grammar got a big pathway through browsing different websites. This browsing could help a teacher in developing his/her language development, aesthetic sense and research skills on various unsolved issues of language related theory and practice. Developing online teaching learning material could be an easy task for a teacher if he/she was well aware of tech-pedagogy. According to some teachers who engaged themselves in administrative works of admission discussed about the necessity of technology. This knowledge would be helpful in disseminating Career Guidance for students of class XI and XI through Telephonic or Mail Individual or Group Guidance. Proper knowledge of Technology helped a teacher to develop lesson plans on various stories or poems and Instructional materials for different grades. Awareness of Evaluation Rubrics helped a teacher to check and exam a student's development online. So according to Sana, S. (2017) 'Teachers need to be competent and fluent in the usage of educational technology with the latest tools to understand, develop and author the complex web of relationships among tools, technologies, practices, and users.'

Research Question-3
What were the possible ways for the enhancement of the techno-pedagogical skills of a language teacher in Covid 19 situation?
Usage of technology with pedagogy consists of four distinctive processes executed by a teacher (Majella, F.2017)-

Structuring

Executing

Evaluating

Finalizing

While going through all the processes a language teacher had to express his teaching skill with the combination of technology. Some possible ways for developing the TPACK skills of the language teachers are as follows-

Development of Proficiency in English Language for Online teaching-

 As English is regarded as global language for online teaching at first it is very much needed for the teachers to develop their English Language Skill so that they can search about any of the resources from different websites.

Proper usage of different apps for development of Grammar and Vocabulary-

Word Up, Vocabulary Builder, Gunjan Hindi Pathmala, TOEFL English Vocabulary Cards are some of the good apps for developing Grammar and Vocabulary.

Allowing Incentives for the teachers-

After the boresome job of continuous interaction if some incentives are provided by concerning schools or from state and central educational sectors for enhancing teachers ICT development skill then the teachers will be more energetic for acquiring the training.

Publicized Existing ICT Services-

Existing ICT Service should get publicity so that teachers will be aware of their existence and feel inertia to get acquaintance with the services.

Developing web-page-

New web pages like Livemocha, Bussu, Memrise etc. should be developed for teaching of learning of different languages and proper advertisements to be done in this respect.

Web 2.0 Application-

Developing in 2005 this new application becomes popular among teachers for teaching content, developing curricula, storing of data editing of photos and collaboration.

Awareness of Social networking sites-

Awareness of Social networking sites like Flicker, Instagram, Twitter, Facebook etc and the online platform for sharing views and ideas will be helpful for language teachers to be tech-oriented.

Moodle workspace-

 It is regarded as a platform for sharing of views among teachers and multipliers training and communication sharing with others.

Videodiscs for literature teaching-

Usage of videodiscs for teaching stories, poems and dramas from different languages are age old tradition and now a days gets prominence with the advent of TPACK knowledge.

Development of CALL-

According to Levy CALL or Computer Assisted Language Learning can be defined as 'The search for and study of applications of the computer in language teaching and learning.' The knowledge in this sector helps a language teacher to be well aware of the tech-conception.

E-books and e-journals-

Reading of e-books and e-journals reward the language teachers with the new application of technologies in language teaching and thus they can be packed with new ideas and platforms of language teaching.

Audio-books-

In 1995 Baskin and Harris wrote in their paper 'The first literature heard not read.' So the use of Audio-books can be a great source of tech-knowledge Play-way is a kind of Audio-book for language learning.

Online Learning-

Often referred to as e-learning Online-learning is a type of education that takes place over the Internet. EdX, Academic Earth, MIT OpenCourseWare are such types of Online Learning sites for language teachers.

Computer Assisted Pronunciation Training-

Liu, S. & Hung, P. (2016) studied that CAPT offers a medium for increasing users' access to their own and others' pronunciation performance, for focusing their attention on phonology, and for acquiring new pronunciation patterns and thus is ultimately helpful for a language teachers.

Webinars and Online Conference for developing Tech-Pedagogy-

Webinars and Online Conferences should be held with the language professionals and different techniques for Technological Skill developments in the area of language training should be discussed.

FINDINGS:

i) Technological use in education is an outcome of continuous changing process and starts from Gurukul Education and through a long journey of different ups and downs emerges as a Techno Pedagogic Skills of a teacher.

ii) In a situation like Covid 19 the technological Skills of a language teacher is very important because education is now totally dependent on virtual interaction.

iii) For developing the four skills of Reading, Writing, Speaking and Listening, every language teacher has to use the e-platform by arranging space for online debate, discussions, webinars.

iv) E-books and Online Library are the best sources of information and gathering knowledge.

v) As we are in an age of 21st century, with the advancement of technology there are many ways of teaching without face to face transaction. In case of language teaching teachers must give importance to those processes for continuing the teaching learning process for the enrichment of students.

CONCLUSION:

Everything changes with the passage of time and with time every living and non-living beings in our nature change its forms and features. This change cannot be marked out by drawing a divisional line rather it's a gradual process where everything changes automatically. Teaching profession also is going through the changes where the age old system of Sruti culture changes into a school room system where teacher student interaction becomes possible. Ancient culture of Lecture Method and one sided teacher centric education transforms into a student centric classroom where interaction becomes the key. Here comes the knowledge of pedagogy regarded as the Art and Science of Teaching and thereafter the term Techno-pedagogy occurs to be existed in the society. Now in this Covid 19 situation when the education system is collapsing there is a continuing inclination towards the Techno Pedagogic skills of a teacher. A language teacher hence should be well aware about the uses of technology while transferring the lessons to his students through a voyage of virtual world.

RECOMMENDATIONS:

i) Every teacher language as well as other subjects should be aware of their knowledge of Techno Pedagogy.

ii) This study can be done on Science as well as other Social Science teachers.

iii) Internet connection in remote areas should be available in large scales so that the students and teachers both can use it.

iv) Teachers and students should be aware of using technology in teaching learning process and they should be taught about the boons of technology.

v) As a theory based subject a book is the only medium of language teaching learning process. Teachers should change this idea to be well aware of transacting lessons through e-learning process.

vi) Different online programs, webinars, seminars can be arranged for developing the awareness of Techno-pedagogical skills.

REFERRENCES:

i) Beaudin, L. & Haddin, C. 2004. Tendency and Pedagogy: Building Techno-pedagogical Skills in Pre-service Teachers. Researchget.net.

ii) Albirini, A. 2006. Teachers' Attitudes toward Information and Communication Technologies: The Case of Syrian EFL Teachers. Computers and Education.

iii) Archambault, L. & Crippen, K. 2009. Examining TPACK Among K-12 Online Distance Educators in the United Stated. Contemporary Issues in Technology and Teacher Education. 9(1), pp-71-78.

iv) Mouza, C. 2011. Promoting Urban Teachers' Understanding of Technology, Content and Pedagogy in the Context of Case Development. Journal of Research on Technology in Education.

v) Redmond, P. 2011. From face-to-face teaching to online teaching: Pedagogical Transitions; Proceedings Ascilite Hobart.

vi) Shyamlee, S. 2012. Use of Technology in English Language Teaching and Learning: An Analysis. International Conference on Language, Medias and Culture.

vii) Nomassi, B. 2013. The Impact of Using Technology in Teaching English as a Second Language. English Language and Literature Studies.

viii) Mishra, B. 2015. Innovative ways of English Language Teaching in Rural India through Education. International Journal of English and Literature.

ix) Thakur, N.2015. A Study on Implementation of Techno-Pedagogical Skills, Its Challenges and Role to Release at Higher Level of Education. American International Journal of Research in Humanities, Arts and Social Sciences.

x) Ammanni, S. & Aparanjani, U. 2016. The Role of ICT in English Language Teaching and Learning. International Journal of Scientific and Engineering Research. Vol. 7, Issue-2, ISSN. 2259-5518.

xi) Hung, P & Liu, S. 2016. Teaching Pronunciation with Computer Assisted Pronunciation Instruction in a Technology University. Universal Journal of Educational Research.

xii) Jayanthi, N. & Kumar, R. 2016. Use of ICT in English Language Teaching and Learning. Veda's Journal of English Language and Literature.

xiii) K.K, Sibichen. 2016. Techno-Pedagogical Skills of Secondary Teacher Education Students. International Journal of Science and Research.

xiv) Majella, F. 2017. Techno-Pedagogy in Teaching and Learning. Shanlax International Journal of Education.

xv) Vijaya, R. & Vijaya, Ram. 2017. Techno-Pedagogy in Teaching and Learning. Shanlax International Journal of Education. Vol.5, ISSN: 2320-2653.

xvi) Yildiz, A. 2017. The Factors Affecting Techno-pedagogical Competencies and Critical Thinking Skills of Preservice Mathematics Teachers. Malaysian Online Journal of Educational Sciences.

xvii) Ahmadi, M. 2018. The use of Technology in English Language Learning A Literature Review. International Journal of Research in English Education.

xviii) Gloria, R. & Benjamin, A. 2018. Attitude of Teachers Towards Techno-Pedagogy. International Journal of Engineering Technologies and Management Research,Vol.5, ISSN. 2454-1907.

xix) Patel, D. 2018. Significance of Technology Enhanced Language Learning (TELL) in Language Classes. Journal of Technology for ELT.

xx) Sana et. al. 2018. Exploring Teacher's Techno-Pedagogical Competency to Achieve Process Oriented Skills of Learners: A Multimedia Context. Inquisitive Teacher. Vol- V, Issue II, pp. 174-188 Online ISSN-2455-5827

xxi) S.L, Pradeep. 2018. A Study of Techno-Pedagogical Skills of Secondary School Hindi Teachers Working in Kerala. International Journal of Advanced Research and Innovative Ideas in Education.

xxii) A, Alqahtani. 2019. The use of Technology in English Language Teaching. Frontiers in Education Technology.

xxiii) Beri, N. & Sharma, L. 2019. A Study on Technological Pedagogical and Content Knowledge among Teacher-Educators in Punjab Region. International Journal of Engineering and Advanced Technology. Vol.8, Isuue-5C, ISSN-2249-8958.

xxiv) McFadden, C. 2019. How Technology Has revolutionized Language Learning; Interstingengineering.com

xxv) Ali, W. 2020. Online and Remote Learning in Higher Education Institutes; A Necessity in Light of Covid 19 Pandemic. Researchget.net

xxvi) Alirezabeigi et. al. 2020. Investigating Digital Doings Through Breakdowns: a Sociomaterial Ethnography of a Bring Your Own Device School. Learning Media and Technology.

xxvii) Arora, A. & Srinivasan, R. 2020. Impact of Pandemic Covid-19 on the Teaching-learning Process. A study of Higher Education; Indian Journal of Management.

xxviii) Bao, W. 2020. Covid 19 and Online Teaching in Hgher Education: A Case Study in Peking University. Hum Behav and Emerg Tech. pp-113-115

xxix) Basilaia, G. & Kvavadze, D. 2020. Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVD-19) Pandemic in Georgia. Pedagogical Research.
xxxi) Choudhury, R. 2020. Covid-19 Pandemic: Impact and Strategies for Education Sector in India. ET Government,com
xxxii) Daniel, J. 2020. Education and the Covid-19 Pandemic. Prospects 2020.
xxxiii) Isaeva, R. 2020. How Covid-19 is Reshaping Teaching and Learning: A Perspective From Khazar University; Sphere- Support and Promotion for Higher Education Reform Experts.
xxxiv) Murphy, M. 2020. COVID-19 and Emergency e-learning: Consequences of the Securitization of Higher Education for Post-pandemic Pedagogy. Contemporary Security Policy. 41:3, 492-505.

xxxv)Patrinos, H. & Shmis, T. 2020. Can Technology help mitigate the Impact of Covid-19 on Education systems in Europe and Central Asia? WorldBank.org: Eurasian Perspectives.

xxxvi) Williamson, et. al. 2020. Pandemic Politics, Pedagogies and Practices: Digital Technologies and Distance Education During the Corona Virus Emergency. Learning, Media and Technology.

xxxvii) Sudharkaran, N. Teacher as a Techno-Pedagogue: Importance of ICT in ELT. academia.edu

xxxviii) The Impact of Corona Virus on higher education. Keystone Academic Solutions. Retrieved from website https://www.timeshighereducation.com