

# The Evolution of Teaching; Past Present and Future



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*The advent of technology has revolutionized the education sector, transforming the teaching landscape. This study explores the evolution of teaching, tracing its trajectory from traditional methods to contemporary technological innovations. This quantitative research employs a Google Forms questionnaire to gauge stakeholders' perceptions on technology integration in education. The study's primary objective is to investigate the impact of technology on teaching methodologies, examining the shift from conventional pedagogies to digital platforms. A comprehensive review of existing literature highlights government initiatives, facilities, and schemes promoting technology-enabled education. Key sources include government reports, academic journals, and reputable educational institutions. The questionnaire, distributed among students, teachers, and administrators, sought responses on the effectiveness, accessibility, and future prospects of technology in education. Descriptive statistics and inferential analysis reveal significant correlations between technology adoption and enhanced learning outcomes. Findings indicate a marked improvement in student engagement, accessibility, and personalization through technology-enabled instruction. However, concerns regarding digital divide, infrastructure, and teacher training emerge as significant challenges. The study proposes strategic recommendations for educators, policymakers, and stakeholders to harness technology's potential, ensuring inclusive and quality education. This research contributes to the existing body of knowledge on education technology, offering insights into the past, present, and future of teaching. The geographical focus on Mangalore provides a nuanced understanding of regional specificities, while the quantitative and qualitative approach ensures generalizability.*

**Keywords:** Education Technology, Teaching Methodologies, Digital Pedagogy, Government Initiatives, Technology Integration, Quantitative and Qualitative Research.

## 1. Introduction

Teaching is defined as the act of communicating knowledge, skills and values to learning subjects by means of instructions, directions and explanations. It refers to the process of aiding clients learn ideas and gain skills in a specific method and can be done by teachers within a classroom setting. Education on the other hand has a wider perspective of a process of acquiring formal, informal and non-formal knowledge, skills, values and habits. It can be structured it happens in schools or universities and unstructured, as it may be a perception gained through interactions, through experience, or through personal-initiated learning. Education serves to develop the human being with a view to preparing him for a useful citizenship and for the pursuit of knowledge throughout his life time. The evolution of teaching has transformed significantly over centuries, shaped by cultural, technological, and philosophical changes. From ancient oral traditions and one-room schoolhouses to modern digital classrooms, the methods and approaches to teaching have improved significantly.

### **Past (1960-2000)**

The use of technology at institutions in Mangalore started in 1960s with start of audio visual aids such as filmstrip and overhead projector at institutions namely St. Aloysius Chapel and Bejai Museum. The use of personal computers in colleges like St. Aloysius College and Mangalore University came in the 1980s. Internet-based education was set up in the 1990 and some institutions such as National Institute of Technology Karnataka (NITK) and Mangalore University were able to offer online learning.

### **Present (2010-2024)**

As we speak, Mangalore educational institution has adopted technologically enhanced education. Some notable developments include: 1) Digital Classrooms: Present day school's such as St. Aloysius High school and Canara High school admitted smart board and projector in the classrooms. 2) Online Courses: Mangalore University and NITK Playground also have their online courses and certification programs. 3) Educational Apps: There are regional apps like "Mangalore Education" and "Learn Mangalore" available which provides information and tutorial services. 4) E-Learning Platforms: Some of the colleges include Yenepoya University and AJ Institute of Engineering and Technology where the learning management system use Moodle and Black Board.

### **Future (2024s and Beyond)**

Looking ahead, Mangalore's education sector is poised for further technological advancements: 1) Virtual and Augmented Reality (VR/AR): Systems such as NITK and Mangalore University are hoping to incorporate VR/AR in learning experience. 2) Artificial Intelligence (AI): Local entrepreneurs are now coming up with AI employable adaptive learning solutions for school and college students. Collaborations and Partnerships: The educational institutions in Mangalore are hence seeking third party linkages and international connections with various universities and IT firms to boost innovations and practices. Hence the role played by Mangalore in education technology enhances its position as the leading city to provide robust education technology to more learning institutions in the future.

### **Types of Education**

It can be noted that traditional teaching methods prevailed before the beginning of the twentieth century, before the modern educational approach began to develop rapidly. Preventive teaching methods which prevailed from the previous centuries comprised of teacher centered education. In the Lecture Method, a teacher introduced a concept, passed or explained information to the learners without necessarily gaining feedback. Drill and Practice allowed learners to revise content through several activities while Recitation supposed to make students memorize certain information. Memorization was on routine learning of facts and information while Textbook- based Learning centered the curriculum on textbooks.

### **Beginning with the Period around the turn of the Twentieth Century and Extending to the Middle of the Twentieth Century.**

As for the early years of the twentieth century new techniques appeared. The Project Method founded by John Dewey: a significant ideal of learners Application and learning through projects. Psychologically, the Problem-Solving Approach fostered evaluation and the Discussion Method promoted group discussions and co-learning. The Demonstration Method focused on using objects, actual models and figures to depict a certain concept and Audio-Visual Aids involved the use of films, programs, slides etc.

### **The middle of the Twentieth Century up to the Second Half of the Third Quarter (1950-1980)**

In the mid part of the twentieth century there were further developments. There were two new strategies in the early 1950s; Programmed Instruction applied a straight learning process step by step, self-taught, and Teaching Machines which also self-taught but based on mechanical teaching aids. As a part of the Initiatives of the Federal Government, specific learning objectives and assessment were stressed in the behavioral Objectives Approach. However, there is a need to mention that Experiential Learning by David Kolb is based on deliberately and intentionally acquired and then reflected experience. Team Teaching concerned practice in which two or more teacher taught part or the whole of their classes.

### **Toward the end of the twentieth century (1980s through 2000s).**

Teaching Techniques and Strategies In the late 20th century teaching techniques also underwent through changes. Experience was the major focal point of the Constructivist Approach in that students constructed their knowledge. Collaborative Learning and Cooperative Learning which was fostered group achievement and social skills. The subject approached used includes The Whole Language Approach that merged language and literacy/ and Technology-Enhanced Learning that included computers and the internet.

### **Modern era 2000-2020**

So the modern world of the 21st century presents a number of achievements. The Flipped Classroom model changed the schedule of students' learning by turning practice into class time and the lecture into homework, while Blended Learning model integrated online and traditional class teaching. Personalized Learning delivered instruction targeted specific needs, and Gamification used features of video games for learning. As exemplified by the Project-Based Learning, in which different credits were linked, the number of subjects that were involved in creating one project was multiple, the aspect of Social-Emotional Learning made students become emotionally intelligent.

### **Current trends**

As we approach 2024 educational organizations are utilizing tens of various and merging technologies in teaching, learning, student and institutional engagement and management. Course delivery platforms such as the moodle, canvas and Google classroom are used to teach, submit assignments and enhance communication between the teacher and students. It has vital contribution in delivering smart content, smart assessments, smart grading, and AI-based contents such as virtual intelligent tutors including chatbots for instant help. Virtual Reality (VR) and Augmented Reality (AR) bring into focus, active participation where learning subjects like history, science, and engineering is enhanced. Video conferencing such as Zoom, Microsoft teams and Google Meet conduct virtual communication between the students and instructors or among students.

Also, as much as e-books and other digital resources help student acquire information easily, students get to have detailed resources and fun content to work on. Another trend also called Gamification is gradually emerging as the educational application and platforms tend to include features of games to increase learners' engagement. Google suite, Office 365, and Dropbox give students and teachers an environment where they can share files as well as work from anywhere. Institution employs use data analytics to monitor student outcome, and learning accomplishment, course performance, as well as

curriculum development. In addition, 3D printing comes with practical chances drawing lessons in design, engineering, and science by allowing students to build tangible prototypes. There is also an increasing spending on a better security system to safeguard the data of students and institutions as well. In combination, these technologies enable students and teachers as well as enhance the freedom, interactivity, and individuality of learning procedures.

### Emerging Trends

Now, trends define education and learning more than at any other time in history. Adaptive Learning is when a course can alter its difficulty levels and content through the help of artificial intelligence. Competency-Based Education unlike traditional system emphasizes mastery not age or grade. While Maker Education focuses on project integrated activities and practicalities, STEAM brings art to science, technology, engineering, and mathematics studies. Remote Mentorship is called Virtual Mentorship; Mobile Training is called Mobile Learning. MOOCs refer to large scale online courses and Learning Analytics involves the analysis of data to bring changes to instruction. Neuroscience Informed Education is based on the principles of brain science in terms of teaching, and Blockchain based Learning is to ensure learning with trust and decentralization.

### Comparison

Education sector has gone through all round changes in Mangalore. Seminarizing was more teacher- focused, with very little interactivity using chalk, talk and books as the main resource. However, due to the digital awakening in 2010-2024s, method changed to blended method, inverted classes and project based learning and collaborative learning, etc. In the present time, teachers manage learning by using technological means to help students complete group activities and discourses. Ideally, learning with the use of personalized adaptive technology enhanced by artificial intelligence as well as virtual and augmented reality shall be the future classroom society, with teachers then serving as facilitative learning mentors. This evolution highlights on critical thinking, problem solving skills, teamwork and student-centered approach, which enhances the student for a digital workplace.

However, Mangalore education is faced with existing problems and challenges as a key area of development towards construction of new infrastructure institutions, training of teachers and enhancing the interaction between higher learning institutions and industries as a key area towards innovation and student centeredness.

### Government schemes and initiation in teaching

Some of the current teaching schemes and policies with regard to the teaching profession in government schools and colleges are to offer better teaching through education quality enhancement programs and teachers' training along with the better teaching and learning environments through structural facilities. Each of these programs differ in some way or the other across different countries. However, Mangalore education is faced with existing problems and challenges as a key area of development towards construction of new infrastructure institutions, training of teachers and enhancing the interaction between higher learning institutions and industries as a key area towards innovation and student in teaching. In Mangalore various governmental schemes and programmes are therefore education, teacher training and enhancement of quality of teaching. These are some of the programs that are a feature of the state and national policies. Here are main schemes that impact teaching in Mangalore.

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#### 1. Nali kali

Nali Kali is a very special program which focuses on child friendly education for the primary school children. The methodology that is being used in this kind of teaching is the active learning which makes use of actual learning as they apply what they learn in classrooms activities. In Mangalore most government schools have adopted the Nali Kali method which entails the use of teaching aids, toys, games and learner activities. It means that teachers guide the learning process and students use learning by exploration techniques instead of the conventional teacher centered learning. This program helps the children in their learning process through play so as to make the learning process more fun and functional. As to the program Nali Kali, it has greatly developed students' skills of basic erudition, particularly literacy and numeracy. They agree that students are more eager and interested to learn as children develop this interest while in school. The program has also yielded positive effects on the critical and analytical skills of the students since critical thinking is relevant knowledge and skills in students' future academic and life journey.

#### 2. Mid-Day Meal Scheme (Akshara Dasoha)

The Mid-Day Meal Scheme is focused to combat hungry and malnutrition by providing meals to children accompanied with increase in enrollment and attendance rates. Through offering free balanced and nutritional foods to them, the exercise aims at increasing the health standard and prowess in studies of students. In Mangalore, the scheme is properly implemented in different government and aided schools. Local self-governments and school management committees have the important responsibilities for determining the quality and the nutritional content of the food served. Most schools have engaged local NGOs to supply fresh foods used in preparation of these meals, so that they are not only healthy, but also appealing to the children. Out-of-school

rates especially children from poor households have been boost through introduction of Mid-Day Meal Scheme. According to parent's feedback, the promise of a nutritious meal was found to keep children in school through eating, encouraging families to take their kids to school regularly. Literature reviews have established the fact that, there has been an enhanced students' performance especially in terms of concentration and intelligence quotient arising from nutritional supplements as may be offered by this scheme.

### 3. Samagra Shiksha Abhiyan (SSA)

Samagra Shiksha Abhiyan is a concurrent flagship programme of the Ministry of Human Resource Development, Government of India, has been launched to provide a single unified system of Education for children. It is not only school's physical structures that are of importance, but also how schools can be made better for learning. In Mangalore SSA has ensured accrual of infrastructure facilities such as building construction/ renovation of school buildings, basic amenities such as availability of clean drinking water, sanitation and electricity. An element of the decentralized program is the ability of parents and local organizations to involve themselves in the management of schools. SSA provides organized teachers' training especially with regard to the current developments in instructional process, principles of integration of students with disability and the use of ICT in teaching and learning process. For example, smart boards in teaching and interactive learning modules that have become popular in many institutions and these enable teachers to deliver their lessons interesting ways. At the end of these huge embracive initiatives, Mangalore has achieved the increase in the students' enrollment and retention rate. Teachers have complained that since the use of smart classes education standards have been enhanced with students displaying higher comprehension and recall. The same has seen to it that children with disabilities or from disadvantaged background are given a fair chance to excel academically.

### 4. Rashtriya Madhyamik Shiksha Abhiyan abbreviated as RMSA stands for National Secondary Education Project.

The Rastriya Madhyamik Shiksha Abhiyan (RMSA) pertains to the centre and this is a central Government of India scheme for enhancing secondary education. Understanding the role of this stage in schooling, RMSA tackles various issues in high school setting, including, infrastructure, professional development, and learning environment. One of the main objectives of RMSA is to improve the schools infrastructure that includes construction of more classrooms, laboratories, library such that students remain safe and also promote the desire to learn through proper and adequate facilities. The other is the provision of professional development for teachers since RMSA trains and enhances teaching programs to suit modern teaching practices. Also, RMSA accords importance to the use of Information and Communication Technology (ICT) in education systems. Thus the aim of this initiative is to use multimedia and tools for distance learning as a way of integrating new features while teaching and learning with historical features in effort to meet the future needs of a society for education. For instance, Mangalore region has improved educational infrastructures, and teacher competency in the post RMSA period. It aims to promote equal quality in secondary education to extend the achievement of every child, irrespective of his/her background, an effective learning experience. In conclusion, RMSA has important mission of establishing long term educational system in India .

### 5. Diksha (Digital Infrastructure for Knowledge Sharing).

DIKSHA: Digital Infrastructure for Knowledge Sharing is a centrally sponsored scheme of the Government of India unveiled to build teacher effectiveness and in turn learning achievement. This web-based tool offers teachers access to training materials, lessons, and instructional tools consonant with the National Curriculum Framework. Thus, DIKSHA's main purpose is to develop a suitable model of continuous professional development of teachers through information and educational technologies to provide teachers with the desired training at a convenient time for them. It entails numerous teaching facilities that involve lesson plans and multimedia that makes lesson more attractive to students and enhances their understanding. Furthermore, DIKSHA helps teachers to collaborate, to exchange narratives, to highlight issues and to draw from one another's experiences with the development of a professional learning community. DIKSHA is welcomed and appreciated in Mangalore because teachers have realized that it can facilitate the new teaching models even in districts which are out of reach. It also promotes improvement in the quality of teachers by providing certificates that call for consistent improvement of certification. In sync with the National Education Policy for enhancing teacher training, DIKSHA contributes largely in developing a capable teaching force, the students and the entire education system to advantage

### 6. Karnataka State Government Scholarship Programs

Scholarships are important tools of preventive motivation for education especially to the poor students who are majority in rural areas. These financial helps release the task of costs that are usually incurred in education so that student do not have to spend most of their time and energy worrying about how to settle college bills. Scholarships give an opportunity to students by meeting their tuition education books and other necessary requirements in an endeavor to achieve their studies goals. Empirical evidences collected from Mangalore reveal that scholarship interventions has a positive influence in government schools. Scholarship award earns higher motivation, better attendance rates and participation in learning activities among students. This financial support leads to a more effective class practicing, teachers, and learners being on the receiving end of these benefits. Scholarships ensure averagely privileged students are given a level playing ground in education thus improving interaction in class and overall comprehension. The teachers indeed confessed to having close acquaintance with the recipients of the scholarships and they felt obliged to assist their accomplishments. Besides academic achievements, scholarship fosters assertiveness, perseverance to name but a few qualities students are likely to encounter in their working lives. On balance,

scholarship programs assert boosts in motivation levels, attendance and learning environment, for the learners and teachers. Such continuable support from scholarships has direct impacts to make the educational change to enhance the result of students and all related stakeholders..

### 7. School Development and Monitoring Committees (SDMCs)

School Development and Monitoring Committees (SDMCs) in Karnataka act as a strategic intervention that seek to develop the quality of education by enabling community participation in school management. This program thus adopted the supportive role of the teachers, parents, local government and other members of the society leading to decision making in the facility. Unlike many other settings, Mangalore teachers are not only on the receiving end of policy but are actively involved in devising strategies which have implications for lessons outcomes. They provide commitment because individuals are involved in making decisions that affect their work and learning of the students. This engagement enhances better teaching practices and the kind of qualities in education enhance the development of proper school policies due to the understanding of teachers regarding challenges like engagement and attendance of learners in a classroom. These problems, however, can be solved through close cooperation with the committee so that unique solutions could be developed by the educators. In general, the SDMC initiative enhances school working cooperation as it guarantees the coherent policy implementation considering classroom practices. It also firms up the educational process and makes teachers more capable of contributing to their students personal educational processes.

### 8. Prime Minister Skill Development Scheme (PMDY)

The Prime Minister Skill Development Scheme (PMDY) is a PM centered and a mass approach for skill development of the youth of the country for employment. In Mangalore specifically, this program entails offering the students employment readiness to enhance comprehensive vocational training in fields such as information technology and health care. TN: The focus is made on practical experience, which is why the training is adjusted to the needs of the present. It also focuses growth of professionals involved in education regarding their skills in teaching practices within the field. Consequently, PMDY will focus on teacher training because the agency wants to enhance education quality and help students succeed. The scheme has enhanced enrolment of students in vocationally oriented courses as more doors are being opened towards employment after the course. Further, PMDY has enhanced physical facilities and equipment required for vocation, training and practical teaching in mangalore institutions. LM: More broadly PMDY encourages a co-operative outlook to the teaching/student skills mix in favour of students and teachers. Given Mangalore lapsing into generating a demand for skilled professionals as it gears up to meet the pressures of a competitive environment, PMDY act as a strong link between what the education system delivers and what the region's economy requires, thereby foster the development of a competent human capital.

## 2. Literature Reviews

**Kumar, Y., & Pai, K.** Post COVID-19, demonstrates how the pandemic had severely impacted human life and economic activity globally, leading to a national lockdown in India. This has heightened the demand for ICT in higher education, presenting challenges in implementing virtual learning over traditional methods and addressing the efficiency and ease of use, however, **Kulal, A., Nanjundaswamy, A., Dinesh, S., Suraj, N., & Mallika, N. (2024)** argues that the goal of the current study was to investigate how FDP can improve teachers' abilities by utilizing cutting-edge teaching strategies and contemporary technology. Additionally, to assess how FDPs affect teachers' attitudes and drive to incorporate cutting-edge teaching innovations into their lesson plans. **Panakaje, N., Ur Rahiman, H., Parvin, S. R., P, S., K, M., Yatheen, & Irfana, S. (2024)**, explores the impact of technology integration on teaching practices, specifically examining its effects on student engagement, teacher learning, pedagogical strategies, and teacher performance. A key challenge addressed is the implementation of creative teaching strategies that cater to students' technologically advanced tastes, while emphasizing the importance of teachers adopting new technologies. The research also investigates the contribution of institutional assistance in enhancing these outcomes. Utilizing a mixed-methods approach, the study combines quantitative analysis with qualitative considerations to provide a comprehensive understanding of technology integration's role in improving teaching practices.

**Mishra, N., & Aithal, P. S. (2023).** **Ancient Indian Education**, demonstrates India's educational heritage dating back to ancient times, with its Golden Age producing notable achievements: the system of the decimal, Sanskrit epics, the knowledge and progress in astronomy, mathematics and metallurgy. The four Vedas namely Rigveda Yajurveda, Samveda and the fourth one is Atharva Veda were the parts of education and the principles, the customs, and the behaviors. Prehistoric training concepts incorporated the procedures of passing on knowledge from mouth to ear besides the technique of contemplative thought-Chintan. Ever since the growth of the educational system of India, more emphasis has been laid on the theory of action Karl. Modern higher education has undergone a multidisciplinary approach than seeing it as a specialized academic course with professionals in academics.

**CH, P. (2023)**, discusses on the current systems of education require some form of a change to suit the global changes as well as embracing the current technology. Sub-program NEP-2020 introduces teacher-centred changes with reference to the changes that teacher education programs have to undertake to encompass a child-centric approach. Improving the efficiency of teachers is regarded as highly important vision for learning in the 21st century. Self- analysis is important, and there are numerous ways of ensuring that pre-service teachers become reflective thinkers: reflective journals are one example. This review aims at reporting on the application of reflective journals in teacher education with a view of strengthening the best practices. However, **Pinto, R. K. (2022)**, states that digital technology makes learners engage and collaborate to achieve better

learning outcomes. Teacher content knowledge is very important as the TPACK Model and Connectivism theory Supports. The research on the teachers involved 260 teachers whereby most teachers had average knowledge in digital technology **Asif, hence, N., & Panakaje, N. (2022)**, states that the utilisation of technologies such as; multimedia and information technology play enormous roles in enhancing education in India both as a tool to improve education and as a factor hindering the education process. This article reviews emerging paradigms and patterns, contrasting them to the present system at the same time as considering structures, technology and internet advancements in Indian education and presenting plans for correct implementation accompanied by a SWOC analysis. **As per Kori, D., & Naik, R. (2023)**, Information security is the safeguard against unauthorized access to information and data leading to security of information against loss of confidentiality, integrity, and availability. This subject researched the information security awareness of postgraduate students at Mangalore University as a survey tool for raising the awareness levels on security, changing risky behavior, and the promotion of a security culture; thus offering a recommendation for improving security awareness. **Mariya, C. G., Joseph, A., Marina, A., Jesly, M. K., Veronica, M., & Sabeena, M. T. P. (2023)**, talks on the government of the country that initiated a lockdown for the whole country. In order to avoid transmission of the disease in congested facility of education institutions, states had to shift to online learning and healthcare. Students intending in medical and nursing faculties also, in addition to face-to-face lessons, used such platforms as Impartus, Zoom, and Google Meet. Owing to the emergence of other waves of the pandemic, learning institutions thus only had ngalore

### 3. Objectives

1. To understand how technology has transformed education delivery, student engagement, and overall learning outcomes, as well as to identify potential opportunities and challenges for future educational systems.
2. To analyze the impact of technological advancements on education by exploring the changes in teaching methods, learning tools, and accessibility from the past to the present, and to forecast potential future trends
3. To assess the current role of technology in education, examining how modern tools, digital platforms, and innovative teaching methods are enhancing learning experiences and improving accessibility in today's educational systems.

#### Detailed Methodology

Meaning: Research methodology is the systematic and scientific procedure being utilized to research a particular problem and to answer the questions or hypotheses formulated out of the problem. It comprises the approach to study, the instruments of data gathering, procedures of selecting samples, tools of data analysis, and practices of checking validity and reliability. The goal of research methodology is to make the study scientific, impartial, accurate, dependable, authentic and higher order. This way, bias is reduced, accuracy improved, and credibility of the observed results thereby. increased. Research methodology therefore is the framework within which the entire research endeavour is conducted from problem definition, data collection, analysis up to the stage of conclusion.

#### Methodology Applied

This research applies questionnaire method to examine the effects of and attitude towards technological enhanced learning. Survey questionnaires were administered to a purposive sample of teachers and students in several colleges to gain their perceptions about the use of technology in learning facilities. The questionnaire consisted of questions about the technological development, successful implementation of technology in learning, various advantages and difficulties of changing to technology-based learning system and its prospects. The primary rationale was to obtain additional empirical evidence concerning the use of technology from the perception of educators and learners and hence, practical recommendations concerning the role and impact of information technology in the processes of formation of a new educational environment. Consequently, the conclusions of the present study add to the existing knowledge base regarding educational technology with implications for policy, practice and research pursuits. Thus, this study contributes to the knowledge of technology enhanced learning: how it has been developed in Mangalore and what insights may be inferred by educators, policymakers, and researchers.

**Research Sample:** Students and Teachers of Mangalore City specifically deemed to be universities like St Aloysius deemed to be university, Yenepoya deemed to be university, Nitte deemed to be university.

**Sample Size:** Total 140 respondents both teachers and students.

Students-120

Teachers-50

### 4. Outcome of the Study

This study on technology-enhanced learning (TEL) in Mangalore yields significant outcomes, notably: The study proves useful in understanding factual and practical TEL views from educators and learners, including its advantages and limitations. With the use of expended questionnaires and by positive response from 140 students and teachers in different colleges the study provides unequivocal validation of TEL that may serve as input to policies, practices and more research. The findings help to enhance the progress of educational technology by adding to the group of known approaches to building learning environments based on information and communication technology. Therefore, the present study has implications for policymakers,

educators, and scholars, as it provides practical suggestions for enhancing the use of TEL. Knowing the predispositions of educators and learners, policymakers can develop appropriate interventions; educators can also improve practices. Further studies can be made from this framework of comparing TEL in other scenarios to understand its effectiveness beyond this study. In conclusion, this research works as an enabler to improve knowledge on TEL and strengthen decision-making on TEL for education improvement. Its importance is derived from the lack of studies on TEL, its role in establishing theoretical framework and for the creation of technology- enhanced learning context.

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