

School-Based Variations In Technology Acceptance In Secondary Level English Language Classrooms: A Systematic Review

by Amanda Chaudhuri^{1*}, Sayantani Sengupta¹

¹Department of Education, Techno India University, Salt Lake City,
Kolkata, West Bengal, India.

*Corresponding Author: Email: achaudhuri.87@gmail.com

Received on: May 18, 2026 | Accepted on: July 20, 2026 | Published on: September 30, 2026

Abstract

Technology has been an integral part of every sphere of life. The utilisation of tech-based devices in academics is no exception. Educators and learners use technology to impart education and acquire knowledge. Incorporating technology into English language teaching/learning began in the latter half of the 1950s and early 1960s, with the appearance of Computer-Assisted Language Learning (CALL) and early systems such as PLATO (1960) (Warschauer, 1996; Levy, 1997). English, as the first language and as the second language, is taught in secondary classes in Kolkata. Kolkata provides a suitable setting for this review because its school system includes institutions affiliated with different educational boards that differ considerably in terms of infrastructure, funding, approach to tech-based resources, and organisational assistance for technology integration. This review paper examines the school-based variations in technology acceptance in secondary-level English language classrooms in Kolkata. The chosen educational institutions are affiliated with the West Bengal Board, Government Schools, and ICSE. The paper is based on twenty studies. Two theoretical models are used to examine how infrastructure, teacher competence, socio-economic background, and institutional support affect ICT adoption. The findings in this paper reveal a clear distinction in the quality of teaching between ICSE and West Bengal Board government schools.

Keywords: Technology Acceptance, ICT, English Language Teaching, ICSE Schools, West Bengal Board Government Schools.

Introduction:

Computer-based digitalisation makes a significant contribution to school-level English education. The significance of learning the English subject is, in the following words, commonly quoted as being attributed to the Curriculum Framework of the Nation (NCF, 2005), developed by the NCERT. In a

multilingual country like India, English serves as a widely used and most important language. The ways and conditions of teaching English differ greatly because these rely on two main factors: the teacher's expertise in English and the amount of exposure students receive to English outside the classroom. The wording appears in the National Focus Group Position Paper on Teaching of English. The association of the

English language with technology has reached its peak and has increased learners' language competence, as said by Mark Warschauer & Richard Kern in the year 2000.

Kolkata has been selected as the focus of this review because it represents a diverse educational landscape where schools affiliated with different educational boards operate under contrasting institutional and socio-economic conditions. To be specific, ICSE-affiliated schools and government schools under the West Bengal Board differ to a great extent in terms of infrastructure, financial assistance, digital resources, teacher training, and institutional help for the execution of digital-based devices. This institutional disparity reflects the broader multi-level digital divide in India, which manifests across structural access, digital usage skills, and eventual socio-educational outcomes. In the booming Indian landscape, systemic disparities often line up along socio-economic boundaries, urban-under-resourced divides, and varying institutional mandates. These variations make Kolkata an appropriate setting for evaluating how school-level determinants affect technology approval in English language classrooms situation as reported by UNESCO.

Review Of Related Literature

Çeşme, H., and Akdağ, Ç. B. (2026) in their study, "EFL teachers' technology readiness and intention to use online education: The mediating role of TAM", aimed to find EFL educators' acceptance of digitalisation in educational settings. Investigators used an inquiry form with the intention of collecting and analysing the data. The results indicated that teachers used tech-based tools when they found those useful, when they were properly trained, and when those were easy to use and provided assistance.

Davis (1989) and Venkatesh et al. (2003) tried to find the institution-based digital divide in Kolkata through the behaviour, intention, and technology adoption models by reviewing prior studies. It also explains how educators, learners, school administrators, and parents unite to make maximum use of digitalisation in English language learning.

While previous studies have primarily examined technology adoption, teachers' willingness, or ICT integration in individual educational contexts, this review brings these findings together within a common analytical foundation based on the behaviour intention model and technology adoption model. By identifying school-based disparities in infrastructure, digital resources, institutional support, teacher competence, and learners' access to technology, the review provides an overarching comprehension of the determinants affecting digital acceptance. The review also gives proofs that can help policymakers, school administrators, and teacher educators in designing interventions to lessen the digital divide and promote effective digital-enabled English language teaching across different school systems.

Sahayu, W., Triyono, S., and Ungu, N. K. (2026) conducted a study entitled "Digital Technology in Differentiated ELT: A Systematic Review with Bibliometric Insights." They examined the application of digital-based devices for variation-based English Language Teaching (ELT) and to identify emerging research trends in digital pedagogy. The investigators employed a structured literature review using the Scopus database, adhering to the PRISMA guidelines, and performed bibliometric analysis through VOSviewer on 93 Scopus-indexed studies published between 2015 and 2025. The results revealed that digital technologies substantially assist differentiated ELT by promoting learner-

centred instruction and improving instructional flexibility. However, the review also reported the limited adoption of Artificial Intelligence and other emerging technologies, primarily because of inadequate digital infrastructure, insufficient teacher preparedness, and unequal institutional support. The study further emphasised that successful ICT integration depends on educators' digital competence, continuous professional upliftment, and adequate technological amenities. These findings also mirror the broader issue of the digital divide, where variations in technological resources and institutional capacity influence the effective implementation of technological teaching practices. Although the review provides valuable global proof, it highlights the need for context-specific investigations in Indian secondary schools, where disparity in ICT infrastructure, resource availability, and institutional assistance continues to build technology acceptance and classroom integration.

Danzan, T., Sambuu, U., Chuluunbat, M., Avkhinsukh, T., and Sandag, E. (2025) conducted the study paper "ICT Readiness of Secondary School Teachers: Mongolian Case Study", which examined the ICT readiness of secondary school educators in Mongolia, focusing on their ICT competence, teaching practices, classroom infrastructure, and use of ICT for inclusive education. The study used the UNESCO DIGITAL ASSESSMENT Survey Questionnaire as the first tool and adopted a quantitative analysis approach involving 1,917 educators from over 150 secondary schools. Data were interpreted utilising Microsoft Excel and SPSS 22. Findings showed that the educators were generally ready to utilise ICT in their daily imparting of education and possessed good digital literacy; however, they needed further training in ICT-integrated practice of teaching. The study concluded that constant professional development, stronger ICT amenities, and

effective policy implementation are significant for enhancing ICT integration in schools.

Akram, R., Ahmad, M., and Cheema, A. B. (2025) conducted a study titled "Comparing the Digital Learning Practices in Public and Private Schools." The objective of the study was to differentiate the technical learning practices of students in government-funded institutions and private schools and examine variations in the implementation of tech-based devices for face-to-face acquisition of knowledge, assignment writing, note-taking, internet use, and exam preparation. The study adopted a quantitative comparative research design. A self-developed rating scale, validated by experts and pilot-tested (Cronbach's Alpha = 0.94), was used as the research tool. The sample consisted of 580 eighth-standard learners from government-funded and private institutions in Sargodha, selected through random sampling, and the information was analysed using summary statistics and Group comparison tests. The results showed that learners in private schools demonstrated significantly higher levels of tech-based learning practices than those in government-funded schools. Investigations concluded that private schools had better integration of digital technologies and recommended improved technological infrastructure, teacher training, and equal access to digital resources in public schools to enhance digital learning.

Chand, S. S., Kumar, B. A., Goundar, M. S., and Narayan, A. (2022) conducted the study "Extended UTAUT Model for Mobile Learning Adoption Studies" to develop an expanded Technology Adoption model for analysing the suitability of portable digital devices like smartphones. The study aimed to find additional determinants affecting mobile learning acceptance by reviewing previous research. The tools used were a reproducible literature method

and UTAUT framework evaluations. The methodology involved analysing 77 portable digital studies based on mobile devices and validating the proposed extended model. The findings revealed that, besides the original UTAUT constructs, dealings, self-efficacy, invention, drive, fulfilment, mindset, proficiency, readiness, and quality attributes significantly influence mobile device learning adoption. The study concluded that the extended UTAUT framework provides a well-organised structure for comprehending and predicting mobile learning adoption.

Abbad, M. M. (2021) aimed to find learners' use of tools in online learning on the tech-based adoption framework. "Using UTAUT to Understand Students' Usage of E-learning Systems" was the title of his article. A quantitative survey-based approach was used as the methodology. He employed the technology adoption framework as a tool to interpret data. The experiment's findings revealed that students use e-learning tools when they discover them to be beneficial, easy to use, and also used by their teachers. Moreover, in a school, the infrastructure should be good.

Radianti, J. et al. (2020) titled their study "A systematic review of immersive Virtual Reality applications". It aimed to examine the utilisation of simulated reality. The researchers used a systematic literature review to interpret existing studies on Virtual Reality (VR) based learning. The findings depicted an evaluation and comprehension of how much VR is applicable and beneficial in learning. The study entitled "An e-learning acceptance evaluation through UTAUT model" by Radianti, J. et al. (2020) aimed to assess technology acceptance using the technology adoption framework. The research methodology was a quantitative survey-based approach using the technology adoption model. The tools used were a structured questionnaire

and statistical analysis (e.g., regression/SEM). The findings revealed that students willingly used e-learning tools when they found those useful and provided they had a facilitator or teacher to explain their usage.

Zawacki-Richter et al (2019) named their study, "AI Applications in Education: A systematic review". The study aimed to know how AI is used in academics. The researchers used a structured literature review method, and the tools used were a systematic literature survey. The findings revealed that AI helps in assisting students in their learning by making their tasks easy and also identifying the research gaps.

Mahande and Malago (2019) conducted a study entitled "An E-Learning Acceptance Evaluation through UTAUT Model", which is aimed at assessing technology adoption using their adoption framework. The researchers employed a questionnaire for information gathering and used statistical interpretation to examine associations among variables. The results showed that good amenities and assistance helped the inclusion of online learning, and the availability of technology makes its use more convenient.

Al-Emran et al (2018) wrote a paper named "TAM in Educational Context: A systematic review". The objective of the research was to apply the Behavioural Objective Model in educational settings and to identify the key factors influencing technology adaptation. The researchers employed a systematic literature review method; the tools that they used were systematic classification and analysis of research papers on academic databases. The result indicated that students make use of digital tools when they find them simple and easily applicable.

Kumar, A., Ahsan, M., and Negi, M. (2017) conducted an investigation titled "A Comparative Study of Proficiency in English and Study Habits of Government and Non-Government School Students." The study aimed to differentiate the

English subject proficiency and skills of learners in public and non-government schools as well as to examine the connection between acquiring skills and English competence. The researchers adopted a cross-sectional method and selected a sample of 154 secondary school pupils from 22 public and private institutions in Raipur Block, Dehradun, using cluster random sampling. The tools used for data gathering were the English Language Proficiency Test (ELPT) and the Study Habits Inventory. Data were analysed using the t-test. Findings showed no important variations in the skills of students from private and public schools. However, a significant difference was observed in English language proficiency; notably, students from non-government schools demonstrated higher levels of proficiency. The results also depicted a positive correlation between effective skills and English language competence, suggesting that well-developed skills played a major role in improving learners' English language acquisition.

In 2017, Tondeur et al. conducted a study named "Understanding the relationship between teachers' pedagogical beliefs and technology use in education: a systematic review of qualitative evidence". The objective was to interpret how teachers' trust influences their tech-based usage in classrooms. A quantitative study was used as the methodology, and the tools used were questionnaires and statistical analysis. The findings revealed that there was clear discrimination between teachers who believe in the traditional method of teaching and those who are student-centric and use technology more effectively than them.

The study by Burston, J. (2015), titled "Twenty years of MALL project implementation", aimed to analyse the efficiencies of portable-assisted language learning over two decades. The researcher employed a meta-analysis of numerous MALL projects to evaluate learning

outcomes. The result indicated that mobile learning improves language learning, creating motivation, but this sort of research should be conducted on a large scale.

Prakash G. S. and Kavitha (2012) conducted a study titled "A Comparative Study on Perception of the Use of ICT in School Learning and Teaching by 10th Standard Students of SSLC and ICSE Board." The objective of the research was to differentiate the viewpoints of SSLC and ICSE Class X learners regarding the utilisation of ICT in the mutual exchange of knowledge and skill development. The study adopted a comparative survey method, collecting data through survey questions and analysing it utilising the t-test. The results indicated that learners had an optimistic perception of ICT in education and highlighted the need for further studies with larger samples.

Teo, T. (2011) in the study named "Factors influencing teachers' intention to use technology: Model development and test", factors affecting teachers' behaviour to use ICT. Inquiry forms were used for information collection. Findings reveal that educators use digital tools when they find it beneficial, comfortable to use, and have an optimistic notion about it.

Sang, G., et al (2010), in the investigation named "Student-teachers' thinking processes and Information and Communication Technology integration: Predictors of prospective teaching behaviours," explored how student teachers' approval of tech devices in imparting education can change their beliefs and thinking patterns. Tools that were used included questionnaires and statistical analysis. The findings were that student teachers' optimistic attitude towards the utilisation of digitalisation made changes in their imparting of education in the near future.

"An Analysis of the TAM in understanding university students' behavioural intention to use e-learning" was the name of the study by Park, S.Y. (2009). The objective was to find how

students conceive the utility of technology and its influence. The study employed a questionnaire for information collection and used regression interpretations to interpret the results. The results showed that online learning systems were used by the students to fulfil their needs, such as ease of use, user-friendliness, and to cater to their academic needs.

A study by Birch, A., and Irvine, V. (2009), “Pre-service Teachers’ Acceptance of ICT integration in classroom”, aimed to find in what way pre-service teachers accept digitalised education. The researchers employed a questionnaire based on the behaviour intention framework. Interpretation of the data using procedures, such as predictive modelling, was done. Effective use of technology is possible if educators know how to use it, with little support and proper training in the classes, which was the result of the study.

“Modelling Technology Acceptance in Education: A Study of Pre-Service Teachers”, by Teo (2009), examined preliminary educators' approval of ICT and found that psychological state, beliefs, and convenience of utility significantly influenced technology adoption.

Investigations emphasised that educators are pivotal to successful tech integration in classrooms. The research emphasises the significance of educator attitudes and the integration of technology. The information was gathered from pre-service educators. The data were analysed using covariance structure analysis. The study found the willingness to use technology, the teachers' attitudes, and the comfort level in using the technology in class.

The technology adoption framework, integrating multiple models of tech-based approval in the study titled “User acceptance of IT: Toward a unified view”, was formulated by Viswanath V. et al. (2003). The investigation identified production standards, self-indulgence, and favourable circumstances as core determinants. This model is particularly useful in analysing institutional and school-level variations. Questionnaires and statistical analysis (SEM) are used in this study. The study found that expected outcomes and social indulgence influence the use of technology. Approval of technology also varies with respect to age, sex, and experience, and overall technology approval is 70%.

Synthesis Of Review of Literature

Name of the author and the Year	Name of the Study	Objectives	Tools Used	Findings
Çeşme, H., and Akdağ Çimen, B. ((2026)	EFL teachers’ technology readiness and intention to use online education: The mediating role of TAM	The study aimed to find out how EFL educators accept digitalisation in educational settings.	Investigators used an inquiry form with the intention of collecting and analysing the data as a tool.	The results indicated that teachers used tech-based tools when they found those useful, when they were properly trained, and when those were easy to use

				and provided assistance.
Sahayu, W., Triyono, S., and Ungu, N. K. (2026)	Digital Technology in Differentiated English Language Teaching: A Systematic Review with Bibliometric Insights	To find the applicability of digital technology in differentiated ELT and identify research trends.	Using the Scopus database, PRISMA guidelines, and VOSviewer for bibliometric analysis, the researchers conducted a systematic literature review of 93 Scopus-indexed studies (2015–2025).	The study found that digital technologies significantly support differentiated ELT, while AI and other emerging technologies remain underutilized. It also concluded that professional attitudes, organisational assistance, and adequate technological amenities are essential for effective implementation.
Danzan, T., Sambuu, U., Chuluunbat, M., Avkhinsukh, T., and Sandag, E. (2025)	ICT Readiness of Secondary School Teachers: Mongolian Case Study	To find the ICT readiness of secondary school educators in Mongolia, focusing on their ICT competence, teaching practices, classroom infrastructure, and use of ICT for inclusive education.	The study used the UNESCO ICT Readiness Survey Questionnaire as the primary tool and adopted a quantitative survey method involving 1,917 teachers from over 150 secondary schools. Data were interpreted through MS Excel and SPSS 22.	The results indicate that continuous teacher training, robust ICT infrastructure, and effective policy implementation are key to enhancing ICT integration in schools.

Akram, R., Ahmad, M., and Cheema, A. B. (2025)	Comparing the Digital Learning Practices in Public and Private Schools	The purpose of the study was to differentiate the tech-based learning practices of learners in public and private institutions and examine variations in the use of tech-based tools for classroom learning, assignment writing, note-taking, internet use, and exam preparation.	Adoption of a quantitative comparative research design was adopted . A self-developed rating scale, validated by experts and pilot-tested (Cronbach's Alpha = 0.94), was used as the research tool. The sample consisted of 580 eighth-standard learners from government and private institutions in Sargodha, chosen through probability sampling, and the data were interpreted using descriptive statistics and t-tests.	The results showed that students in private institutions demonstrated significantly higher standards of online learning practices than those in government institutions. The research concluded that private schools had better integration of digital technologies and recommended improved technological infrastructure, teacher training, and equal access to digital resources in public schools to enhance digital learning.
Chand, S. S., Kumar, B. A., Goundar, M. S., and Narayan, A. (2022)	Using UTAUT to Understand Students' Usage of E-learning Systems	To develop an extended Technology Adoption model for explaining mobile learning adoption.	The tools used were a reproducible literature method and UTAUT framework evaluations. The methodology involved analysing 77 portable digital	The results revealed that, besides the original UTAUT constructs, dealings, self-efficacy, innovation, drive, fulfilment, mindset, proficiency,

			studies based on mobile devices and validating the proposed extended model.	readiness, and quality attributes significantly influence mobile learning adoption. The study concluded that the extended UTAUT framework provides a more well-organised structure for comprehending and predicting mobile learning adoption.
Abbad, M. M. (2021).	Using the Unified Theory of Acceptance and Use of Technology to understand students' usage of E-learning Systems	Aimed to examine learners' approval and utilisation of online learning through the UTAUT framework.	A quantitative survey-based approach was used as a methodology, using the technology adoption model for data analysis as a tool.	Findings showed that facilitating conditions and institutional support systems play a vital part in affecting learners' utilisation of portable-learning tech-based devices, highlighting the significance of infrastructure and support in technology acceptance.
Radianti, J., et al. (2020)	A systematic review of immersive Virtual Reality applications	The investigation was conducted to assess the utilisation of simulated reality in academics.	Researchers used a systematic literature review to analyse existing studies on VR-based learning.	The findings revealed that students willingly used e-learning tools when they found them useful and

				provided, they had a facilitator to explain their usage.
Mahande, R. D., Malago, J. D. (2019)	An E-learning Acceptance Evaluation through the Unified Theory of Acceptance and Use of Technology Model	An assessment of online learning approval utilising the framework of UTAUT.	Researchers employed a questionnaire for data gathering and used statistical interpretations to examine the interconnections among variables.	The findings revealed that infrastructure and enabling factors play a part in influencing the adoption of e-learning, stressing the significance of technological assistance and resources in determining users' acceptance of digital instructional frameworks.
Zawacki-Richter, O., et al (2019)	Artificial Intelligence Applications in Education: A Systematic Review	It is intended to find out the opportunities and trends of AI applicability in academics.	The researchers used a systematic literature review method, analysing a large quantity of publications associated with Artificial Intelligence in the educational field.	Results revealed that Artificial Intelligence is primarily used in fields such as adaptive learning systems, smart tutoring systems, administrative support, and the capability to improve individualised learning and student involvement. However, the study also highlighted that

				the adoption of AI in education depends on determinants such as tech-based amenities, teacher readiness, and organisational support, which affect the overall approval and productive use of tech-based devices in classrooms.
Al-Emran et al. (2018),	TAM in an educational context: A Systematic Review	Aimed to find the utilisation of the Behaviour Intention framework in the academic sphere and to recognise the key determinants affecting technology adaptation.	Researchers employed an organised literature assessment method, analysing a large number of empirical studies related to behavioural intention in education.	The results indicated that students make use of digital tools when they find them applicable and simple in their usage.
Kumar, A., Ahsan, M., and Negi, M. (2017)	A Comparative Study of Proficiency in English and Study Habits of Government and Non-Government School Students	The objective of the study was to compare English achievement and study habits among students from public and private schools and to determine the outcome of learning strategies on English achievement.	Researchers adopted a descriptive survey method and selected a sample of 154 secondary school students from 22 public and private schools in Raipur Block, Dehradun, using cluster random sampling. The tools utilised for	The results stated that there were negligible variations in the skills of learners from public and private institutions; however, there was an important difference in English language proficiency, with students from non-government

			sample collection were the ELPT) and the Study Practices Inventory. Data were analysed using the t-test.	schools performing better. The study also depicted an optimistic connection between effective study habits and English competence, indicating that effective study habits contribute to improving English language learning.
Tondeur, J., et al (2017).,	Understanding the relationship between teachers' Pedagogical beliefs and Technology Use in Education.	The objectives were to interpret how educators' pedagogical trust affects their application of ICT in class.	A quantitative study was used as the methodology, and the tools used were questionnaires and statistical analysis.	The results showed that there was clear discrimination between teachers who believe in the traditional method of teaching and those who are student centric use technology more effectively than them.
Burston, J. (2015).	Twenty years of MALL project implementation	Aimed to analyze the efficiency of portable-support language learning (MALL) over two decades.	The researcher employed a meta-analysis of numerous MALL projects to evaluate learning outcomes.	The findings indicated that mobile learning significantly enhances language skills, learner engagement, and motivation, demonstrating its effectiveness as a device for

				language education, imparting and learning, particularly in facilitating interactive and flexible learning environments.
Prakash G.S.and Kavitha (2012)	A Comparative Study on Perception of the Use of ICT in School Learning and Teaching by 10th Standard Students of SSLC and ICSE Board.	Research examines and differentiates the perceptions of SSLC and ICSE Class X learners regarding the utilisation of ICT in academics.	A comparative survey method was used, and information was gathered through survey questions and analysed utilising a t-test.	The results indicated that learners had an optimistic perception of ICT in education and highlighted the need for further studies with larger samples.
Teo, T. (2011).	Factors Influencing teachers' Intention to use Technology: Model Development and Test	To examine the determinants influencing teachers' intention to utilise tech-based devices.	Questionnaires were used for data collection.	The findings reveal that educators use tech-based tools. They find it useful, comfortable to use, and develop an optimistic notion about it.
Sang, G., et al. (2010).	Teachers' thinking processes and Information and Communication Technology integration: Predictors of prospective teaching behaviours.	To investigate determinants affecting student teachers' ICT integration.	The tools used were questionnaires and statistical analysis.	The findings were that teacher beliefs and self-efficacy strongly affect ICT adoption.

Park, S.Y. (2009).	An Analysis of the TAM in Understanding University students' Behavioural intention to use E-Learning	The objective was to find out learners' approval of online learning using the behaviour intention framework.	The study utilised an inquiry form for data gathering and applied regression analysis to interpret the results.	The findings showed that user-friendliness and comfortable ease of use most strongly affect students' need to use online learning systems, emphasising the significance of these determinants in tech-based adoption in academic fields.
Birch, A., and Irvine, V. (2009).	Pre-service teachers' acceptance of Information and Communication Technology integration in the classroom	To investigate the determinants affecting pre-service educators' approval of tech-based devices for teaching.	Researchers employed a survey questionnaire based on the Behaviour Intention model and interpreted the data using statistical methods such as regression analysis.	The research study further stresses the abundant training and organisational assistance required for effective tech integration, stressing the contribution of educator preparation in successful tech-based adaptation.
Teo, T. (2009)	Modelling technology acceptance in education: A study of Pre-Service teachers	The investigators aimed to find out that educators' approval of ICT and examined how attitudes, beliefs, and user-friendliness strongly affect adoption.	The information was gathered from student teachers, and the information was analysed using statistical methods such as regression analysis.	The study found the willingness to use tech-based devices, the educator's intention, and the comfort level to use in class.

Viswanath Venkatesh et al. (2003)	User Acceptance of IT: Toward a unified view	The study recognised the outcomes, social indulgence, and favourable circumstances as core determinants.	Questionnaires and statistical analysis (SEM),	Results showed that positive advantages and users' motives affect real use, while helping conditions also have a role. Factors like age, sex, and experience affect acceptance, and the model accounts for about 70% of tech use.
-----------------------------------	--	--	--	---

The table synthesises 20 studies conducted between 2003 and 2026 on digital approval and ICT integration in academics. The Behaviour Intention Model and the Technology Adoption Model were the two models on which these studies were chosen. The methodology adopted to collect data was quantitative surveys, questionnaires, and structured reviews. The results consistently indicated that impact, ease of use, comparative benefits, self-belief, supportive environment, and organisational assistance are major determinants of technology adoption. The review also highlights that teacher readiness, professional training, adequate ICT infrastructure, and equitable access to digital resources are essential for successful technology integration. Recent studies further stress the educational potential of Virtual Reality (VR) and Mobile-Equipped Language Learning in enhancing personalised learning, learner engagement, and language proficiency. Overall, the literature concludes that effective digital learning depends on both technological innovation and the preparedness of teachers and

institutions to integrate these tech-based devices into education.

Research Gaps Identified

- While tech-based acceptance was observed, its direct impact on English proficiency (listening, reading, writing, and speaking skills) was not adequately studied.
- Earlier studies stressed general tech-based adoption in higher education, with restricted direct similarity between ICSE and Government secondary schools, especially in the Indian context.
- There was a dearth of studies in Kolkata and, more generally, in West Bengal that considered socio-cultural and organisational variations affecting technical acceptance.
- Although differences between private and government schools were identified, organised research into how the digital divide affected technology acceptance was limited.

Research Questions:

1. What determinants contribute to diversification in ICT adoption between ICSE and Government schools?
2. Which are the ways of finding how educators' technological abilities affect students' English learning outcomes?

Methodology:

A systematic review of relevant research on the selected topic was carried out by the researcher. The selected literature was carefully examined and organised into major themes. The review followed a structured protocol to identify relevant studies on technology acceptance and digital technologies in education. Literature was searched using keywords related to TAM, UTAUT, ICT, VR, MALL, and ELT across Research Gate, Shodhganga, ERIC, and Google Scholar. Linguistic studies published between 2003 and 2026 were included and confirmed to be peer-reviewed. While conference papers, book chapters, dissertations, duplicates, and irrelevant studies were excluded. The selected studies were screened for relevance, methodological quality, and theoretical contribution. The synthesis of 20 studies gives a complete comprehension of tech-based adaptation and ICT integration in academics. This review synthesises evidence on technology approval in secondary-level English classroom situations, stressing variations between ICSE and Government schools. Its findings inform educational policy by emphasising the need for equitable ICT infrastructure, teacher preparedness, and effective technology integration across both school systems.

Behaviour Intention Model:

This model denotes how a user approves of tech-based devices and uses them. It is a system that looks at how one improves job performance.

Technology Adoption Model:

This model denotes how a user uses the information and what the subsequent function of it is.

Findings From the Review of Related Literature:

Digital Approval Components: The review findings stated that ICSE schools depict an affinity towards ICT usage in classrooms, as there were better tech-based amenities, organisational help, and adherence to ICT-based learning. Conversely, government schools generally adopt technology at a minimum rate because of limited resources, inadequate access to tech-based devices, and insufficient technological exposure.

Social and Psychological Components: Reviews stated that teachers in ICSE schools generally had a better mindset, confidence level, and self-assurance in them in imbibing technology. Positive attitudes and organisational support further intensified technology adoption. On the other hand, educators in government schools may have confronted difficulties in adopting tech-based devices because of limited training opportunities.

Facilitating Conditions: Successful teaching is reflected in ICSE schools because of proper internet connections, administrative support, and supply of tech-based resources, which created a good environment for learning. Managerial assistance and access to modern amenities assisted teachers and executed ICT based teaching fruitfully. Public schools, however, often faced hardships with infrastructural

restrictions, fragile technological assistance systems, and dirt in digital facilities, which obstructed effective digital usage.

Teacher Expertise: Teachers in ICSE schools are seen to be relatively more ready and digitally competent in integrating digital tools into the formal education system. Continuous professional growth and institutional support contributed to their readiness. In public schools, many educators still needed added knowledge and skill-building programmes to improve their capability and self-belief in using digitalisation productively.

Instructional Beliefs: The reviews stressed that ICSE schools tended to succeed more in learner-centred and innovative teaching approaches that inspired the utilisation of technology for communicative learning. Educators often united multimedia resources, online resources, and digital activities into lessons. Government schools, in comparison, depended more on conventional teaching methods because of limited digital access and resource constraints.

Institutional Adaptations: Important variations existed between ICSE and government schools relating to ICT adoption and its execution. ICSE schools generally depicted high technical integration because of superior digital integration, economic assistance, and infrastructure and institutional preparedness. Government schools frequently faced financial and amenity challenges that restrained the successful execution of digitalisation in classrooms.

Student Involvement and Learning: Tech-based learning tools such as mobile learning applications, imitations, and interactive platforms enhanced student engagement, motivation, and involvement in ICSE schools. Students benefited from greater opportunities for collaborative and digital-based learning. In government schools, unbalanced access to technical devices and

internet amenities often restricted students' engagement in digitally supported learning activities.

Online learning Approval: ICSE schools took to online learning platforms because of assistive environments, digital readiness, and proper support systems. Educators and learners were able to carry on learning through virtual technological frameworks with relatively fewer setbacks. Government schools, however, faced obstacles in adapting to online instruction due to restricted digital amenities and inadequate technical accessibility.

Upcoming Digitalisations: The utilisation of AI and other advanced technological tools has improved the personalised and innovative learning atmosphere. Government schools, however, continued to see challenges in adapting to growing digitalisation because of the lower availability of amenities, technical readiness, and economic assistance.

Digital Gap: The reviews clearly recognised a digital gap between ICSE and government schools. ICSE schools provided broader digital resources and greater access to technical resources, while government schools often experienced restricted use of devices, online connections, and ICT amenities. These differentiations-built distinctions in technology adoption, learning opportunities, and educational feedback between the two types of educational setups.

Discussions:

Digital tool acceptance in intermediate-level English language classrooms differs significantly between ICSE and public schools due to school-based determinants, especially in Kolkata. ICSE schools generally have better amenities, including digital gadgets and internet access, which help in the fruitful imparting of education. In contrast, government schools often face

technical restrictions, leading to dependence on traditional methods (Atabek, 2019). Teacher preparedness is another essential factor, as ICSE teachers generally obtain more training and discourse on technology, while government school teachers have fewer possibilities, affecting ICT integration. Additionally, institutional assistance and financial assistance are better in ICSE schools, whereas government schools face hardships with execution gaps (Pelgrum, 2001). However, variations in infrastructure, digital access, and digital competence among learners and educators continue to affect the effectiveness and acceptance of these technologies in education. The digital disparity among learners further widens this gap, as ICSE students typically have greater access to gadgets and the internet at home. These differences affect mindsets toward technology, with ICSE environments showing higher acceptance.

Conclusion:

Based on the review of 20 studies, technology approval in educational settings appears to be affected by an interplay of individual, technological, institutional determinants, etc. The Technology Adoption Model and the Behaviour Intention Model consistently identify performance level, usability, individual beliefs, social affectation, and facilitating conditions as important factors of ICT adoption. These 20 analysed studies also delineate that educators' attitudes, digital competence, and professional training play a significant part in the successful blending of digitalisation into English language classrooms.

The literature further suggests that institutional support, digital infrastructure, and access to technological resources contribute substantially to successful ICT implementation. Several studies also report positive associations between the use of upcoming tech-based devices, such as access to portable learning, artificial intelligence, and virtual reality, and enhanced learner involvement and learning outcomes. However, these findings vary across educational contexts and should therefore be interpreted with caution.

In the Kolkata context, the reviewed studies suggest differences in ICT integration between ICSE-affiliated and government schools. These differences are generally associated with variations in infrastructure, institutional support, teacher preparedness, and access to digital resources. Nevertheless, the available evidence is limited and largely context-specific, making it difficult to draw broad conclusions about all schools within these sectors.

The review indicates that successful technology acceptance in secondary-level English language classrooms depends not only on users' perceptions but also on institutional capacity and contextual factors. The findings highlight the importance of strengthening digital infrastructure, expanding teacher professional development, and promoting equitable access to ICT resources. Future empirical research involving expanded and more varied samples is required to validate these patterns and provide stronger comparative evidence across different school systems.

Reference:

Çeşme, H., & Akdağ Çimen, B. (2026). EFL teachers' technology readiness and intention to use online education: The mediating role of TAM. *SAGE Open*, 16(1).<https://doi.org/10.1177/21582440251410825>

Sahayu, W., S. Triyono, and N. K. Ungu. (2026). "Digital Technology in Differentiated English Language Teaching: A Systematic Review with Bibliometric Insights." *Indonesian Journal of Science and Technology* 11, no. 1. <https://doi.org/10.17509/ijost.v11i2.89685>.

Akram, R., et al. (2025). Comparing the digital learning practices in public and private schools. *Qlantic Journal of Social Sciences*, 6(3):149-159.<https://doi.org/10.55737/qjss.vi-iii.25395>

Danzan, T., Sambuu, U., Chuluunbat, M., Avkhinsukh, T., & Sandag, E. (2025). ICT readiness of secondary school teachers: Mongolian case study. *Contemporary Educational Technology*, 17(3), Article ep586. <https://doi.org/10.30935/cedtech/16531>

Chand, S. S., Kumar, B. A., Goundar, M. S., & Narayan, A. (2022). Using UTAUT to understand students' usage of e-learning systems. *Education and Information Technologies*, 28(7), 8963–8988. <https://doi.org/10.1007/s10639-022-11537-3>

Abbad, M. M. (2021). Using the unified theory of acceptance and use of technology to understand students' usage of e-learning systems. *Education and Information Technologies*, 26(5), 5099–5120. <https://doi.org/10.1007/s10639-021-10515-y>

Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers & Education*, 147, 103778. <https://doi.org/10.1016/j.compedu.2019.103778>

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher

education: Where are the educators? *International Journal of Educational Technology in Higher Education*, 16(39), 1–27. <https://doi.org/10.1186/s41239-019-0171-0>

Al-Emran, M., Mezhyuev, V., & Kamaludin, A. (2018). Technology acceptance model in m-learning context: A systematic review. *Computers & Education*, 125, 389–412. <https://doi.org/10.1016/j.compedu.2018.06.008>

Tondeur, J., Van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *Educational Technology Research and Development*, 65(3), 555–575. <https://doi.org/10.1007/s11423-016-9481-2>

Kumar, A., Ahsan, M., & Negi, M. (2017). A comparative study of proficiency in English and study habits of government and non-government school students. *International Journal of English Language Education*, 5(2), 54–67. <https://doi.org/10.5296/ijelev.v5i2.11874>

Burston, J. (2015). Twenty years of mobile-assisted language learning project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4–20. <https://doi.org/10.1017/S095740421400015X>

Prakash, G. S., & Kavitha. (2012). A comparative study on the perception of the use of ICT in school learning and teaching by 10th standard students of SSLC and ICSE boards. *Journal of Education and Practice*, 3(1), 12–18.

Sang, G., Valcke, M., Van Braak, J., & Tondeur, J. (2010). Student teachers' thinking processes and ICT integration: Predictors of prospective teaching behaviours. *Computers & Education*, 54(1), 103–112. <https://doi.org/10.1016/j.compedu.2009.07.010>

Teo, T. (2011). Factors influencing teachers' intention to use technology: Model development and test.

Computers & Education, 57(4), 2432–2440.
<https://doi.org/10.1016/j.compedu.2011.06.008>

Sang, G., Valcke, M., Van Braak, J., & Tondeur, J. (2010). Student teachers' thinking processes and ICT integration: Predictors of prospective teaching behaviours. *Computers & Education*, 54(1), 103–112.
<https://doi.org/10.1016/j.compedu.2009.07.010>

Teo, T. (2009). Modelling technology acceptance in education: A study of pre-service teachers. *Computers & Education*, 52(2), 302–312.
<https://doi.org/10.1016/j.compedu.2008.08.006>

Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioural intention to use e-learning. *Educational Technology & Society*, 12(3), 150–162.

Birch, A., & Irvine, V. (2009). Preservice teachers' acceptance of information and communication technology integration in the classroom. *Educational Media International*, 46(4), 295–315.
<https://doi.org/10.1080/09523980903387506>

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>

Declaration of Conflicting Interests

The author/s declare/s no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Contributors

Amanda Chaudhuri

Ph.D. Scholar, Department of Education, Techno India University, Salt Lake City Kolkata, West Bengal, India.

Email: achaudhuri.87@gmail.com

Dr. Sayantani Sengupta

Assistant Professor, Department of Education, Techno India University, Salt Lake City Kolkata, West Bengal, India.

Email: sayantani.s@technoindiaeducation.com