



# Assessing the effectiveness of the integration of ICT in teaching the English language in the Intermediate Phase in the Tshwane West District Schools in South Africa

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## ABSTRACT

Technology integration in education involves the purposeful incorporation of digital tools to enhance teaching and learning, moving beyond mere substitution of traditional methods. This study investigated the effectiveness of integrating Information and Communication Technology in teaching English at the intermediate phase of primary schools. A qualitative approach within a constructivist paradigm was employed, using a phenomenological design to conduct the study. Data were collected through semi-structured interviews with eight teachers from four primary schools. The study found that ICT integration enhanced learner engagement and motivation in learning English, facilitated more diverse teaching methods, and improved language acquisition in vocabulary and comprehension. However, significant challenges were identified, including limited access to technology, infrastructure deficiencies, and the need for comprehensive teacher support. The digital divide between schools has emerged as a critical concern, creating disparities in the quality of ICT-enhanced education. The study concludes that while ICT integration has significant potential to improve English language education, its effectiveness is highly dependent on adequate infrastructure, resources, and teacher training. This study contributes to the discourse on effective classroom teaching and learning through technology-integrated instruction.

**Keywords:** Communication, Technology, Language, Literacy, Schools.

## INTRODUCTION

Information and Communication Technology (ICT) enables students to become literate by making it simple for them to edit, organise, comment on, and communicate with text. The Becta Report states that ICT helps students become more literate by enabling them to communicate, edit, annotate, and arrange content quickly and easily.<sup>1</sup> The report also states that without learning to use ICT wisely and efficiently, no child will be able to communicate effectively in a world where new technologies are reshaping communication. Enabling students to complete assignments using computers rather than the

<sup>1</sup> Becta Report, *Primary English with ICT: A Pupil's Entitlement to ICT in Primary English* (Coventry: Becta, 2009).

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conventional pen and paper refers to the use of technology to enhance the learning environment and assist classroom instruction.<sup>2</sup>

For the past few decades, traditional teaching approaches have been used in South African classrooms. However, the incorporation of ICT into teaching and learning has moved to the top of the South African education agenda, especially since the issuance of the White Paper on e-Education in 2003.<sup>3</sup> With initiatives to transform teaching and learning in schools through the use of ICT, eLearning, teachers, and administrators in e-schools, South Africa established its own targeted and organised e-education policy.<sup>4</sup> The technology used in the classroom could help resolve some of the problems related to raising the effectiveness and productivity of teaching and learning in South African classrooms.<sup>5</sup>

As a result, South African teachers face a variety of obstacles to integrating technology into a logical framework at the classroom level. There appears to be minimal evidence of technology integration into classroom activities, such as systematic lesson planning and implementation that requires learners to think critically, collaborate, and use technology to assist learning.<sup>6</sup> According to Altavilla, schools and districts are adopting technology to support English learners in response to government policy and the COVID-19 pandemic.<sup>7</sup> However, school officials and teachers receive little assistance to successfully integrate technology to support the students' development and content instruction.<sup>8</sup>

The integration of ICT in education has become a critical focus in South Africa, particularly in language teaching. Although studies have been conducted on ICT integration in the schooling sector, there is a paucity of literature on ICT integration in English language teaching in the primary schools of the Tshwane West District. This study examines the effectiveness of ICT integration in teaching English at the intermediate phase level in schools within the Tshwane West District, and came up with strategies that can be applied to enhance ICT integration in the classroom.

## LITERATURE REVIEW

Integration of ICT in education has become increasingly important, particularly in language teaching. This literature review examines research on the effectiveness of ICT integration in teaching and learning.

### ICT Implementation in South African Education

Information and Communication Technology in education is perceived as a transformative tool that reshapes traditional teaching and learning practices. It enables access to a wide array of information and resources, facilitating a more interactive and student-centered learning environment.

Since 1996, ICT in education has been a policy priority in South Africa.<sup>9</sup> Provincial governments have responded to the national emphasis on ICT as a driver of economic growth and social development by establishing ICT projects in education. In pursuit of provincial economic growth, "Khanya" and "Gauteng-On-Line" were education projects of the Western Cape Province and

<sup>2</sup> J. Dockstader, "Teachers and Technology: Beliefs and Practices," *Computers in the Schools* 25, no. 3–4 (2008): 235–56; S. Ammanni and U. Aparanjani, "The Role of ICT in English Language Teaching and Learning," *International Journal of Scientific & Engineering Research* 7, no. 7 (2016): 1–7.

<sup>3</sup> M. Wilson-Strydom, J. Thomson, and C. Hodgkinson-Williams, "Understanding ICT Integration in South African Classrooms: Research: Information and Communication Technologies," *Perspectives in Education* 23, no. 1 (2005): 71–85.

<sup>4</sup> Leila, Goosen and Ronell Van der Merwe, "E-Learners, Teachers and Managers at e-Schools in South Africa," in *Proceedings of the 10th International Conference on E-Learning (ICEL)*, (Reading: Academic Conferences and Publishing International, 2015), 127–34.

<sup>5</sup> Sekanse Ntsala and Pricilla Mamare Seabela, "Obstructions to the Integration of ICT in English First Additional Language Lessons: The Case of Limpopo Intermediate Phase Classrooms," *Perspectives in Education* 41, no. 2 (June 30, 2023): 233–46, <https://doi.org/10.38140/pie.v41i2.6823>.

<sup>6</sup> M Z. Ramorola, "Challenge of Effective Technology Integration into Teaching and Learning," *Africa Education Review* 10, no. 4 (December 10, 2013): 654–70, <https://doi.org/10.1080/18146627.2013.853559>.

<sup>7</sup> Jennifer Altavilla, "How Technology Affects Instruction for English Learners," *Phi Delta Kappan* 102, no. 1 (2020): 18–23.

<sup>8</sup> Altavilla, "How Technology Affects Instruction for English Learners."

<sup>9</sup> Department of Education, *National Education Policy Act* (Pretoria: Government Printing Works, 1996).

Gauteng Province, respectively, in 2000. The 2004 e-Education Policy aimed to transform learning and teaching through ICT integration.<sup>10</sup>

Thus, the e-Education Policy and the Guidelines for Teacher Training and Professional Development in ICT and Training are two key policy documents that outline the ICT in education policy landscape.<sup>11</sup> The primary objective of the e-Education policy is to meet national education objectives by offering contemporary technologies to schools to improve the quality of learning and instruction.<sup>12</sup> The second policy, Teacher Training and Professional Development in ICT and Training, outlines the ICT knowledge, skills, values, and attitudes that teachers need to effectively apply technology in the national curriculum.<sup>13</sup>

However, implementation has faced challenges. Vandeyar notes that while progress has been made in developing ICT administrative systems, the policy has fallen short of its goal to transform classroom practice.<sup>14</sup> Many schools have integrated ICT into curricula, but were not fully prepared to maximize its value for enhancing teaching and learning quality.<sup>15</sup>

### The Role of ICT in Education

According to UNESCO, ICT in education supports the development of essential 21st-century skills, such as critical thinking, problem-solving, collaboration, and digital literacy, which are crucial for learners to succeed in a rapidly changing world.<sup>16</sup> The integration of ICT into education enriches teaching and learning by providing educators and students with extensive access to digital resources such as online databases, e-books, instructional videos, and podcasts. These tools enable learners to engage with content more independently, allowing flexible pacing and accommodation of different learning preferences.<sup>17</sup>

The application of technology enables improved communication and collaboration. ICT tools, including email, social media, and collaborative platforms like Google Classroom and Microsoft Teams, facilitate communication and collaboration between students and teachers. These tools enable real-time interaction, feedback, and peer-to-peer learning, which are vital for language acquisition and practice.<sup>18</sup>

Information technology enables the customization of instructional content to address the diverse needs of individual learners, thereby supporting personalized learning. Using data analytics, adaptive learning platforms adjust lessons, assessments, and feedback in real time according to each student's performance and learning pace.<sup>19</sup> This personalized approach is particularly beneficial in language learning, where students often have varying levels of proficiency and learning styles.<sup>20</sup>

The integration of multimedia tools, including interactive whiteboards, digital games, and simulations, promotes active and engaging learning experiences. These technologies create simulated,

<sup>10</sup> Department of Basic Education (DBE), *White Paper on E-Education: Transforming Learning and Teaching through ICT* (Pretoria: DBE, 2004).

<sup>11</sup> South Africa Department of Higher Education and Training (DHET), *White Paper for Post-School Education and Training* (Pretoria: Government Printers, 2013); Department of Education, *Guidelines for Teacher Training and Professional Development in ICT* (Pretoria: Government Printing Works, 2007).

<sup>12</sup> Department of Basic Education (DBE), *White Paper on E-Education: Transforming Learning and Teaching through ICT* (Pretoria: DBE, 2004).

<sup>13</sup> Department of Education, *Guidelines for Teacher Training and Professional Development in ICT*.

<sup>14</sup> Thirusellvan Vandeyar, "Practice as Policy in ICT for Education: Catalysing Communities of Practice in Education in South Africa," *Technology in Society* 35, no. 4 (November 2013): 248–57, <https://doi.org/10.1016/j.techsoc.2013.10.002>.

<sup>15</sup> Rogers Kaliisa and Michelle Picard, "A Systematic Review on Mobile Learning in Higher Education: The African Perspective" 16 (January 1, 2017): 1–18.

<sup>16</sup> UNESCO, "Information and Communication Technology (ICT) in Education in Asia," *Journal of Communication* 22 (2014).

<sup>17</sup> Kaliisa and Picard, "A Systematic Review on Mobile Learning in Higher Education: The African Perspective."

<sup>18</sup> M. Mkhize, "The Role of ICT Tools in Enhancing Communication and Language Development in South African Classrooms," *Journal of Educational Technology and Innovation* 15 (2023): 45–58.

<sup>19</sup> K. VanLehn, "Adaptive Learning Systems and Personalised Instruction," *Educational Psychologist* 58, no. 2 (2023): 79–98.

<sup>20</sup> Barbara Means et al., "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies" (U.S. Department of Education, 2009).

low-risk environments where learners can develop and apply language skills, thereby improving both their confidence and proficiency in language use.<sup>21</sup>

In support of inclusive education, ICT plays a crucial role in supporting inclusive education by providing assistive technologies for students with disabilities. For instance, text-to-speech software, screen readers, and voice recognition tools can help learners with visual, auditory, or motor impairments access educational content and participate in classroom activities.<sup>22</sup> Information and Communication Technology creates a conducive platform for ongoing professional development among educators. Through online courses, webinars, and virtual professional learning networks, teachers gain access to continuous learning opportunities. This persistent engagement supports educators to remain informed about emerging instructional strategies, technological advancements, and effective educational practices.<sup>23</sup>

### **Information and Communication Technology and the Intermediate Phase**

The intermediate phase, which includes learners from grades 4 to 6, is a crucial period for language development. During this phase, learners transition from basic language skills to more complex language use, which requires effective teaching strategies. The integration of ICT in this phase has been found to be particularly beneficial. Pilli explained that ICT-supported teaching in the intermediate phase can lead to improved comprehension, vocabulary acquisition, and literacy skills.<sup>24</sup>

For effective technology integration, Van Deursen et al. emphasize the importance of using digital tools tailored to the cognitive and developmental levels of intermediate phase learners.<sup>25</sup> Chigona and Chigona argue that the effectiveness of ICT integration at this level is heavily dependent on teachers' competence and confidence in using technology.<sup>26</sup> Nkonki and Ntlabathi advocate for a balanced approach that incorporates both digital and traditional methods in the intermediate phase. A blended approach that combines technology-enhanced activities with conventional classroom practices tends to yield the best results for learners at this level.<sup>27</sup>

Moeller and Reitzes found that ICT integration in the intermediate phase can be particularly effective in enabling personalized learning experiences.<sup>28</sup> The study by Pazilah et al. suggests that ICT in intermediate phase classrooms can significantly boost student engagement and motivation.<sup>29</sup> Kang et al. note that ICT integration allows for more diverse and effective assessment methods in the intermediate phase.<sup>30</sup>

Given these considerations, the researchers believe that more targeted research is needed to examine the specific effectiveness and challenges of ICT integration in English teaching at the intermediate phase level in Tshwane West District schools. Such research could inform more nuanced and context-specific development and implementation strategies to maximize the benefits of ICT in this particular educational setting.

<sup>21</sup> T. Mkhize and J. Mtsweni, "The Impact of Multimedia Tools on Language Learning Engagement and Proficiency," *Journal of Educational Technology and Language Learning* 15, no. 2 (2023): 45–59.

<sup>22</sup> Meryl Alper and Gerard Goggin, "Digital Technology and Rights in the Lives of Children with Disabilities," *New Media & Society* 19, no. 5 (2017): 726–40.

<sup>23</sup> J. Smith and P. Mwangi, "The Impact of Information and Communication Technology," 2023.

<sup>24</sup> O. Pilli, "The Effect of ICT-Supported Teaching," *International Journal of Instruction* 7, no. 1 (2014): 1–16.

<sup>25</sup> A. J. Van Deursen, E. J. Helsper, and R. Eynon, "Digital Skills Gaps among Learners," *Information, Communication & Society* 19, no. 6 (2016): 1–18.

<sup>26</sup> A. Chigona and W. Chigona, "An Investigation of Factors Affecting the Use of ICT for Teaching in the Western Cape Schools," *Journal of Education* 50 (2010): 1–19.

<sup>27</sup> V. Nkonki and S. Ntlabathi, "The Forms and Functions of Teaching and Learning Innovations on Blackboard: Substantial or Superficial?," *Electronic Journal of ELearning* 14, no. 4 (2016): 257–65.

<sup>28</sup> B. Moeller and T. Reitzes, *Integrating Technology with Student-Centered Learning. A Report to the Nellie Mae Education Foundation* (Education Development Center, Inc., 2011).

<sup>29</sup> Fetylyana Nor, Pazilah, Harwati Hashim, and Melor Md Yunus, "Using Technology in ESL Classroom: Highlights and Challenges," *Creative Education* 10, no. 12 (2019): 3205–12.

<sup>30</sup> M. Kang, H. Heo, and M. Kim, "The Impact of ICT Use on New Millennium Learners' Educational Performance," *Interactive Technology & Smart Education* 8, no. 1 (2011): 1–23.

## THEORETICAL FRAMEWORK

The Technological Pedagogical Content Knowledge (TPACK) framework provides a critical lens for examining ICT integration in English language teaching within South Africa's Tshwane West District schools.<sup>31</sup> Building on Shulman's foundational work on pedagogical content knowledge,<sup>32</sup> TPACK provides for the analysis of the intersection among technology, pedagogy and content in the context of teaching and learning with technology. Hence, the theory is relevant in investigating the phenomenon of teaching and learning with technology.

## METHODOLOGY

Research methodology refers to the systematic framework used to conduct a study, which guides the selection of methods and procedures for data collection, analysis, and interpretation.<sup>33</sup> Research methods encompass the philosophical assumptions, research design, and specific tools that align with the study's aims and context.<sup>34</sup> For this study, qualitative research methodology was used to explore the effectiveness of ICT integration in teaching and learning. The study used a case study design, which allowed an in-depth exploration of the lived experiences and perspectives of the participants on ICT integration in English language teaching.

The population of the study consisted of primary schools in Tshwane West District, and purposive sampling was used to select four primary schools, with two teachers in each school. The study reached a total of eight participants teaching English in the intermediate phase. This sampling approach ensured that participants with an in-depth understanding and experience of the problem under investigation were included in the study. Data was collected using semi-structured interviews. The data analysis process followed a qualitative approach, utilising coding and thematic analysis. The study was granted ethical clearance by Tshwane University of Technology and the Gauteng Department of Education. The ethical principles of informed consent and confidentiality were applied to the study participants.

## PRESENTATION OF FINDINGS

The findings are presented according to the hermeneutic steps of data analysis. Participants are categorised as follows:

School A: Teacher 1 (T1A), Teacher 2 (T2A)

School B: Teacher 1 (T1B), Teacher 2 (T2B)

School C: Teacher 1 (T1C), Teacher 2 (T2C)

School D: Teacher 1 (T1D), Teacher 2 (T2D)

The study found that ICT tools improved learner engagement and motivation in learning English. Interactive activities, multimedia resources, and personalized learning experiences facilitated by technology contributed to increased learner participation. Interviewees said the following:

T1A: *"Using educational apps and videos in class has made learners more interested in learning English. They participate more when lessons are interactive."*

T2B: *"Digital games and online quizzes help weaker learners improve vocabulary and grammar in a fun way."*

T1C: *"Learners who were shy before now engage more because they can use technology to express themselves."*

The findings suggest that ICT integration supports diverse learning styles, making lessons more dynamic and stimulating. The findings suggest that ICT allows teachers to cater to learners' different learning styles of the learners, allowing individualized learning to take place in a classroom characterised by learners with different learning needs. The study also found that the use of educational

<sup>31</sup> P. Mishra and M. J. Koehler, "Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge," *Teachers College Record* 108, no. 6 (2006): 1017–54; M. Schmid, E. Brianza, and D. Petko, "Developing TPACK among Teachers," *Computers & Education*, 2021, 57–68.

<sup>32</sup> L. S. Shulman, "Knowledge and Teaching: Foundations of the New Reform," *Harvard Educational Review* 57, no. 1 (1987): 1–22.

<sup>33</sup> Ranjit Kumar, "Research Methodology: A Step-by-Step Guide for Beginners," 2018.

<sup>34</sup> John Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, (California: Sage Publications, 2013).

apps, online resources, audio-visual materials, and digital games helps to create a more dynamic and stimulating learning environment.

Despite the benefits, participants identified significant obstacles, particularly in rural schools. Limited access to computers, poor internet connectivity, and insufficient infrastructure hindered effective ICT use.

T2A: *"Our school has only five computers for over 200 learners. Many learners have never used a laptop before."*

T1B: *"The Internet is unstable; sometimes online resources do not load, disrupting lessons."*

T2D: *"Older teachers struggle with technology. Some avoid using ICT because they lack training."*

The digital divide was evident, with urban schools (School C and D) having better ICT access than rural ones (School A and B). This digital divide creates disparities in the quality of ICT-enhanced education available to students in the district.

Teachers, especially those who are older and less familiar with technology, were found to have challenges in adapting to the use of ICT tools in their teaching. This highlighted the need for teacher support and training.

Despite the challenges, teachers who managed to integrate ICT reported improvements in learners' English proficiency, particularly in vocabulary, listening, and grammar. Information and Communication Technology also promotes collaborative learning, which encourages struggling learners to participate in class activities. The study also revealed better communication between teachers and students.

T1D: *"Learners' listening skills improved due to YouTube videos and audio exercises."*

T2C: *"Online group projects helped learners communicate better in English."*

However, disparities existed; schools with better ICT infrastructure saw more progress than those without.

For effective ICT Integration, participants suggested the following:

- Teacher Training: Regular workshops to improve digital literacy.
- Infrastructure Development: Government support for computers and the internet in rural schools.
- Policy Support: Clear guidelines on ICT integration into curricula.

T1C: *"If all teachers were trained, ICT could transform English teaching."*

T2B: *"We need funding for devices and stable Wi-Fi to make this work."*

## DISCUSSION

The findings of this study highlight both the transformative potential and systemic challenges of integrating Information and Communication Technology (ICT) into English language teaching in the four participating schools.

The study confirms that ICT enhances learner engagement, motivation, and language acquisition, thus supporting constructivist and learner-centred approaches.<sup>35</sup> Participants reported that interactive tools (e.g., educational apps, multimedia, digital games) make lessons more dynamic, catering to diverse learning styles.

Increased learner engagement encourages shy and struggling learners to participate more when lessons incorporate technology, as it reduces learner anxiety. The finding is consistent with Kumar & Tammelin, who argue that ICT fosters active participation and autonomy in language learning.<sup>36</sup> Technology-integrated teaching facilitated the learner's language exposure through videos and online interactions, strengthening listening and speaking skills. This aligns with Chapelle's argument that technology bridges the gap between classroom learning and real-world language use.<sup>37</sup> Digital tools also allowed teachers to differentiate instruction, addressing individual learner needs.

<sup>35</sup> Mark Warschauer and Tina Matuchniak, "New Technology and Digital Worlds: Analyzing Evidence of Equity in Access, Use, and Outcomes," *Review of Research in Education* 34, no. 1 (March 2010): 179–225, <https://doi.org/10.3102/0091732X09349791>.

<sup>36</sup> S. Kumar and M. Tammelin, *Integrating ICT into Language Learning and Teaching: Guide for Institutions* (Linz, Austria: Johannes Kepler Universität, 2008).

<sup>37</sup> Carol A. Chapelle, *Computer Applications in Second Language Acquisition* (Cambridge: Cambridge University Press, 2001), <https://doi.org/10.1017/CBO9781139524681>.

However, these benefits are unevenly distributed, and urban schools report greater success due to better infrastructure. According to Selwyn, ICT integration faces structural, technical, and human challenges, reinforcing the digital divide in education.<sup>38</sup> According to the report of UNESCO, the rural schools in the study struggled with inadequate devices, unreliable electricity, and poor internet connectivity, illustrating the impact of resource scarcity, which limits equitable access to education.<sup>39</sup>

Older and untrained teachers resisted ICT integration in teaching due to low digital literacy, supporting the argument by Ertmel and Civelek, that teacher confidence is critical for successful technology integration. Schools lacked a clear ICT policy, leading to inconsistent use.<sup>40</sup> Without structured guidelines, ICT remained optional for teacher use rather than a core teaching strategy.<sup>41</sup>

Ntsala and Seabela, and Ramorola assert that teachers struggle to create an inclusive classroom in which all learners are actively engaged and master the learning content at their own learning pace.<sup>42</sup> However, this study indicates that technology-integrated teaching is imperative because it enables teachers to create an inclusive classroom in which learners are encouraged and motivated to engage in the learning activities, and also learn according to their different learning styles. Technology thus allows teachers to create differentiated instruction. The study findings are within the framework of the TPACK theory, which purports that meaningful ICT integration demands more than access to technology; it requires a balanced interplay of technological, pedagogical, and content knowledge.

The inadequacy of technology resources and the digital divide between schools are a serious hindrance to effective teaching and learning. This study argues that there is an urgent need on the part of education authorities to provide context-sensitive policy that will ensure targeted school investment in technology resources and continuous teacher professional development in technology integration in teaching and learning.

### Discussion Summary

This study used a qualitative methodology underpinned by the constructivism paradigm to explore how teachers integrate ICT into English language instruction for learners in the intermediate phase. Engaging teachers as participants through interviews captured rich, contextually grounded insights into both the possibilities and constraints of ICT integration. The findings revealed that, when effectively implemented, ICT enhanced learner engagement, motivation, and language development; however, persistent infrastructural limitations, uneven access to digital resources, and gaps in teacher training hindered its transformative potential.

Meaningful ICT integration requires a balanced interplay of technological, pedagogical, and content knowledge, supported by ongoing professional development and context-sensitive policies.

### RECOMMENDATIONS

To maximise the pedagogical value of ICT in the under-resourced classrooms, this study recommends that education authorities must provide more funding to under-resourced schools for ICT infrastructure and resources to bridge the digital divide. However, such an expenditure adjustment must not be implemented at the expense of well-resourced schools. The infrastructure and resources of the advantaged schools must continue to be maintained and improved. For successful ICT integration, policymakers must provide continuous teacher support and training.

<sup>38</sup> N. Selwyn, *Education and Technology: Key Issues and Debates* (London: Continuum, 2011).

<sup>39</sup> UNESCO, "Information and Communication Technology (ICT) in Education in Asia."

<sup>40</sup> Adnan Veysel Veysel Ertmel and Mustafa Emre Civelek, "Analyzing the Effect of One-Stop Shopping on Purchase Intention in E-Commerce," *International Journal of Information Systems in the Service Sector* 14, no. 1 (March 18, 2022): 1–15, <https://doi.org/10.4018/IJISS.295871>.

<sup>41</sup> Khe Foon Hew and Thomas Brush, "Integrating Technology into K-12 Teaching and Learning: Current Knowledge Gaps and Recommendations for Future Research," *Educational Technology Research and Development* 55, no. 3 (June 5, 2007): 223–52, <https://doi.org/10.1007/s11423-006-9022-5>.

<sup>42</sup> Ntsala and Seabela, "Obstructions to the Integration of ICT in English First Additional Language Lessons: The Case of Limpopo Intermediate Phase Classrooms"; Ramorola, "Challenge of Effective Technology Integration into Teaching and Learning."

## CONCLUSION

This study has investigated the effectiveness of technology integration in teaching and learning, and the findings highlighted the transformative potential of integrating technology into English language teaching. The findings underscore the potential of ICT to revolutionise English language teaching because technology allows teachers to create an inclusive classroom in which learners learn according to their different learning styles. However, the inadequacy of technological resources and the digital divide between schools are serious obstacles to effective teaching and learning. Without addressing systemic inequities, teacher training, and policy frameworks, ICT may exacerbate existing disparities in education. The study concludes that the provision of context-sensitive policy with targeted school investment in technology resources and continuous teacher support by education authorities will improve the effectiveness of technology integration in teaching and learning.

## BIBLIOGRAPHY

- Alper, Meryl, and Gerard Goggin. "Digital Technology and Rights in the Lives of Children with Disabilities." *New Media & Society* 19, no. 5 (2017): 726–40.
- Altavilla, Jennifer. "How Technology Affects Instruction for English Learners." *Phi Delta Kappan* 102, no. 1 (2020): 18–23.
- Ammanni, S., and U. Aparanjani. "The Role of ICT in English Language Teaching and Learning." *International Journal of Scientific & Engineering Research* 7, no. 7 (2016): 1–7.
- Becta, N. A. T. E. *Primary English with ICT: A Pupil's Entitlement to ICT in Primary English*. Coventry: Becta, 2009.
- Chapelle, Carol A. *Computer Applications in Second Language Acquisition*. Cambridge: Cambridge University Press, 2001. <https://doi.org/10.1017/CBO9781139524681>.
- Chigona, A., and W. Chigona. "An Investigation of Factors Affecting the Use of ICT for Teaching in the Western Cape Schools." *Journal of Education* 50 (2010): 1–19.
- Creswell, John. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE, Ca; Ofprnia. California: Sage Publications, 2013.
- Department of Basic Education (DBE). *White Paper on E-Education: Transforming Learning and Teaching through ICT*. Pretoria: DBE, 2004.
- . *White Paper on E-Education: Transforming Learning and Teaching through ICT*. Pretoria: DBE, 2004.
- Department of Education. *Guidelines for Teacher Training and Professional Development in ICT*. Pretoria: Government Printing works, 2007.
- . *National Education Policy Act*. Pretoria: Government Printing works, 1996.
- Department of Higher Education and Training (DHET), South Africa. *White Paper for Post-School Education and Training*. Pretoria: Government Printers, 2013.
- Deursen, A. J. Van, E. J. Helsper, and R. Eynon. "Digital Skills Gaps among Learners." *Information, Communication & Society* 19, no. 6 (2016): 1–18.
- Dockstader, J. "Teachers and Technology: Beliefs and Practices." *Computers in the Schools* 25, no. 3–4 (2008): 235–56.
- Ertemel, Adnan Veysel Veysel, and Mustafa Emre Civelek. "Analyzing the Effect of One-Stop Shopping on Purchase Intention in E-Commerce." *International Journal of Information Systems in the Service Sector* 14, no. 1 (March 18, 2022): 1–15. <https://doi.org/10.4018/IJISS.295871>.
- Goosen, Leila, and Ronell Van der Merwe. "E-Learners, Teachers and Managers at e-Schools in South Africa." In *Proceedings of the 10th International Conference on E-Learning (ICEL)*, 127–34. Reading: Academic Conferences and Publishing International, 2015.
- Hew, Khe Foon, and Thomas Brush. "Integrating Technology into K-12 Teaching and Learning: Current Knowledge Gaps and Recommendations for Future Research." *Educational Technology Research and Development* 55, no. 3 (June 5, 2007): 223–52. <https://doi.org/10.1007/s11423-006-9022-5>.
- Kaliisa, Rogers, and Michelle Picard. "A Systematic Review on Mobile Learning in Higher Education: The African Perspective" 16 (January 1, 2017): 1–18.

- Kang, M., H. Heo, and M. Kim. "The Impact of ICT Use on New Millennium Learners' Educational Performance." *Interactive Technology & Smart Education* 8, no. 1 (2011): 1–23.
- Kumar, Ranjit. "Research Methodology: A Step-by-Step Guide for Beginners," 2018.
- Kumar, S., and M. Tammelin. *Integrating ICT into Language Learning and Teaching: Guide for Institutions*. Linz, Austria: Johannes Kepler Universität, 2008.
- Means, Barbara, Yuki Toyama, Robert Murphy, Marianne Bakia, and Karla Jones. "Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies." U.S. Department of Education, 2009.
- Mishra, P., and M. J. Koehler. "Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge." *Teachers College Record* 108, no. 6 (2006): 1017–54.
- Mkhize, M. "The Role of ICT Tools in Enhancing Communication and Language Development in South African Classrooms." *Journal of Educational Technology and Innovation* 15(2023): 45–58.
- Mkhize, T., and J. Mtsweni. "The Impact of Multimedia Tools on Language Learning Engagement and Proficiency." *Journal of Educational Technology and Language Learning* 15, no. 2 (2023): 45–59.
- Moeller, B., and T. Reitzes. *Integrating Technology with Student-Centered Learning. A Report to the Nellie Mae Education Foundation*. Education Development Center, Inc., 2011.
- Nkonki, V., and S. Ntlabathi. "The Forms and Functions of Teaching and Learning Innovations on Blackboard: Substantial or Superficial?" *Electronic Journal of ELearning* 14, no. 4 (2016): 257–65.
- Ntsala, Sekanse, and Pricilla Mamare Seabela. "Obstructions to the Integration of ICT in English First Additional Language Lessons: The Case of Limpopo Intermediate Phase Classrooms." *Perspectives in Education* 41, no. 2 (June 30, 2023): 233–46. <https://doi.org/10.38140/pie.v41i2.6823>.
- Pazilah, Fetylyana Nor, Harwati Hashim, and Melor Md Yunus. "Using Technology in ESL Classroom: Highlights and Challenges." *Creative Education* 10, no. 12 (2019): 3205–12.
- Pilli, O. "The Effect of ICT-Supported Teaching." *International Journal of Instruction* 7, no. 1 (2014): 1–16.
- Ramorola, M Z. "Challenge of Effective Technology Integration into Teaching and Learning." *Africa Education Review* 10, no. 4 (December 10, 2013): 654–70. <https://doi.org/10.1080/18146627.2013.853559>.
- Schmid, M., E. Brianza, and D. Petko. "Developing TPACK among Teachers." *Computers & Education*, 2021, 57–68.
- Selwyn, N. *Education and Technology: Key Issues and Debates*. London: Continuum, 2011.
- Shulman, L. S. "Knowledge and Teaching: Foundations of the New Reform." *Harvard Educational Review* 57, no. 1 (1987): 1–22.
- Smith, J., and P. Mwangi. "The Impact of Information and Communication Technology ," 2023.
- UNESCO. "Information and Communication Technology (ICT) in Education in Asia." *Journal of Communication* 22 (2014).
- Vandeyar, Thirusellvan. "Practice as Policy in ICT for Education: Catalysing Communities of Practice in Education in South Africa." *Technology in Society* 35, no. 4 (November 2013): 248–57. <https://doi.org/10.1016/j.techsoc.2013.10.002>.
- VanLehn, K. "Adaptive Learning Systems and Personalised Instruction." *Educational Psychologist* 58, no. 2 (2023): 79–98.
- Warschauer, Mark, and Tina Matuchniak. "New Technology and Digital Worlds: Analyzing Evidence of Equity in Access, Use, and Outcomes." *Review of Research in Education* 34, no. 1 (March 2010): 179–225. <https://doi.org/10.3102/0091732X09349791>.
- Wilson-Strydom, M., J. Thomson, and C. Hodgkinson-Williams. "Understanding ICT Integration in South African Classrooms: Research: Information and Communication Technologies." *Perspectives in Education* 23, no. 1 (2005): 71–85.

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