



# Linguistic Empowerment: Exploring Innovative Approaches To Teaching English In Hyderabad's Engineering Academia

**Arabati Pradeep Kumar**

Associate Professor of English

Anurag University, Hyderabad, Telangana State

ORCID ID: <https://orcid.org/0000-0002-6695-6107>

## Abstract

This research article explores the innovative approaches to teaching English in engineering colleges in Hyderabad, a city known for its thriving information technology and engineering industry in India. English language proficiency is a crucial skill for engineering students due to the evolving nature of technology and its global reach. However, traditional teaching methods often fail to engage and motivate students, leading to ineffective language acquisition. The article discusses the challenges faced by students in acquiring English language skills and highlights the importance of integrating innovative teaching approaches. Through an extensive review of existing literature and secondary data research or qualitative research method, this article presents various innovative strategies such as Project-Based Learning, Content and Language Integrated Learning, technology integration, language labs, Communicative Language Teaching, and immersive learning techniques. It also examines the benefits and limitations of these approaches and provides recommendations for improving the English language education in engineering colleges in Hyderabad. The findings suggest that these approaches offer valuable opportunities to bridge the gap between the theoretical and practical aspects of language learning, promote student engagement, and develop the necessary skills for engineering students to excel in their future careers. The findings of this research will provide valuable insights for educators, curriculum developers, and policymakers seeking to enhance English language education in this specific context.

**Keywords:** English Language Education, Engineering Colleges, Innovative Approaches, Project-Based Learning, Content and Language Integrated Learning, Technology Integration, Language Labs, Immersive Learning, Hyderabad.

## 1. Introduction

In recent years, English language proficiency has become an essential skill for the undergraduate students in Hyderabad's engineering colleges due to the rising demand for global collaborations and opportunities. However, the traditional methods of teaching English have proven to be ineffective in producing confident and competent English speakers. Therefore, this research article aims to explore innovative approaches to teaching English in Hyderabad's engineering colleges, which can address the unique needs and challenges faced by students in this context. Hyderabad, often known as the *Silicon Valley of India*, is home to numerous prestigious engineering colleges. These institutions attract students from diverse linguistic and cultural backgrounds, creating a linguistic melting pot. However, the English language proficiency of engineering students in Hyderabad's colleges is often inadequate, hindering their competitiveness in the global job market. To bridge this gap, innovative teaching approaches are necessary.

English language proficiency has become a vital skill for engineering students in Hyderabad, given the increasing globalisation and demand for highly-skilled professionals. However, the methods traditionally employed in teaching English often fail to meet the needs and expectations of engineering students. The rigid focus on grammar rules and vocabulary memorisation often leads to disengagement and limited practical application of the language. Thus, there is a need to explore innovative approaches that can effectively engage students and develop their English language skills. According to Brown (2007), innovative approaches to teaching English can significantly enhance language acquisition in students. Although English is taught as a compulsory subject in engineering colleges, many students still struggle with effective communication in English due to several factors, including limited exposure, inadequate pedagogical approaches, and the influence of their native languages. To address these challenges, it is essential to explore innovative pedagogical approaches that facilitate effective English language learning and teaching in engineering colleges. This article investigates several innovative approaches to teaching English in engineering colleges in Hyderabad and their potential impact on language learning outcomes.

## 2. Literature Review

The comprehensive literature review analyses previous studies and scholarly articles, focusing on innovative approaches to teaching English in higher education contexts, particularly engineering colleges. The qualitative or secondary research method is used to carry out this research study. English language proficiency is crucial for engineering students to succeed in the globalised and competitive world. Hyderabad, a prominent hub of technical education in India, faces the challenge of equipping engineering students with effective English communication skills. This literature review explores various innovative approaches to teaching English in Hyderabad's engineering colleges, focusing on strategies that enhance language proficiency and bridge the gap between technical and communication skills. Project-Based Learning (PBL) has gained attention for its potential to enhance both technical and language skills. Research conducted by Kumar and Sharma (2015) demonstrated that project-based learning promotes English-speaking abilities in engineering students. According to Thomas (2010), PBL engages students in collaborative projects that require effective communication. In the context of engineering

education, PBL encourages students to articulate their ideas, present findings, and collaborate on solutions, thus improving their English proficiency (Chiu et al., 2016). PBL provides students with opportunities for authentic language use in problem-solving and collaborative settings (Blumenfeld et al., 1991). Engaging in project work necessitates effective communication, encouraging students to articulate ideas, ask questions, and present findings in English (Krajcik et al., 1998). This not only enhances language acquisition but also cultivates communication skills vital for engineering professionals.

Holec and Curado (2019) observed that incorporating CLIL methodology in engineering education can enhance language acquisition and subject understanding simultaneously. Content and Language Integrated Learning (CLIL) is a pedagogical approach that integrates language learning with subject matter content. Studies by Coyle (2008) and Graddol (2006) emphasise the effectiveness of CLIL in fostering language development while simultaneously addressing engineering concepts. CLIL provides students with the opportunity to apply language skills in a technical context, facilitating a seamless integration of language and subject matter.

The use of technology-enhanced language learning has been shown to increase student engagement and motivation (Hampel & Stickler, 2005). The integration of technology, such as online platforms and mobile apps, has shown promise in English language instruction. Kim and Kwon (2014) found that utilising mobile apps for language learning increased student engagement and motivation. Online platforms like Duolingo and Khan Academy offer interactive lessons that can be tailored to engineering-related content, providing a flexible and accessible means of language learning. Virtual Reality (VR) and Augmented Reality (AR) offer immersive experiences that can enhance language learning in technical fields (Chittaro & Ranon, 2009). By simulating real-world engineering scenarios, VR and AR create opportunities for students to practise English communication within a technical context. This approach not only improves language skills but also familiarises students with industry-specific terminology and situations. Research by Velayutham et al. (2016) highlighted the positive impact of online language-learning platforms on English proficiency among engineering students.

Research by Huang (2018) emphasises that role-play in engineering education allows students to practise English in scenarios relevant to their field. In a study by James and Chen (2018), role-play and simulations were found to be valuable tools for practicing professional communication skills in English. Communicative Language Teaching is an approach that focuses on developing students' ability to communicate effectively in real-life situations (Richards & Rodgers, 2001). In the context of engineering education, CLT goes beyond traditional language instruction, emphasising the practical application of language skills in professional settings.

### **3. Innovative Approaches to Teaching English in Engineering Colleges**

#### **3.1. Project-Based Learning (PBL)**

Project-based learning involves engaging students in authentic real-world projects, which not only enhance their technical skills but also foster English language acquisition. By working collaboratively in teams, students are exposed to various communication situations, thereby improving their English-speaking abilities. PBL is a student-centered instructional approach that emphasises the application of knowledge and skills through the completion of real-world projects. It has gained recognition as an innovative approach to teaching English as a

second language, particularly in engineering colleges in Hyderabad. This approach encourages students to actively engage with the language by working on meaningful and relevant projects, fostering language acquisition, critical thinking, creativity, problem-solving, collaboration, and communication skills.

Project-based learning in teaching English involves assigning students projects that require them to use English to research, analyse, synthesise, and present information. Projects can be tailored to the engineering context, such as designing a prototype, conducting research on a technological issue, or creating a technical report. These projects provide students with opportunities to apply their existing knowledge of English while developing new language skills in a practical and authentic setting. One key aspect of PBL is its authentic learning environment. By working on real-world projects, students can see the direct relevance and value of English language skills in their future careers as engineers. This motivation enhances student engagement and language retention. Moreover, English language learning in an engineering context helps improve students' understanding of technical concepts, as language and subject knowledge are integrated in the project tasks (Smith et al., 2013).

PBL also promotes the use of various language skills. During project work, students engage in reading technical documents, conducting research, writing reports, giving presentations, and participating in discussions. Additionally, students actively communicate and collaborate with their peers, instructors, and potentially industry professionals, enabling them to develop their oral and written communication skills in English. Another benefit of PBL in teaching English is the development of critical thinking and problem-solving skills. As students work through their projects, they encounter challenges, analyse information, evaluate solutions, and make informed decisions. This process not only enhances their language proficiency but also nurtures their ability to think critically and creatively – a crucial aspect of engineering education (Johnson et al., 2009). The adoption of PBL in teaching English is further enhanced by the use of technology. Online resources, collaborative platforms, and digital tools enable students to conduct research, access authentic materials, and communicate effectively, both synchronously and asynchronously.

Project-based learning (PBL) is an innovative approach that emphasises active learning and student-centered instruction. In the context of teaching English, PBL involves designing and implementing projects that require students to use English in authentic and meaningful ways. By working on real-life projects, such as designing a prototype or writing technical reports, students are motivated to develop their language skills to communicate effectively and accomplish the given tasks. PBL also promotes critical thinking, problem-solving, and collaboration among students, enhancing their overall learning experience and fostering the integration of language with technical knowledge.

This integration of technology fosters innovative language learning environments and enhances students' technological literacy, a skillset vital in today's engineering field (Velayutham et al., 2016). Project-based learning is an innovative approach that effectively teaches English to engineering students. By engaging in authentic, real-world projects in an engineering context, students develop their language skills and simultaneously improve their understanding of technical concepts. The integration of PBL, language skills, critical thinking, and technology provides a comprehensive learning experience that prepares students for their future careers as engineers.

Therefore, incorporating project-based learning in English instruction in Hyderabad's engineering colleges can greatly contribute to more effective language learning outcomes.

The contextualised nature of PBL aligns with the technical content of engineering courses. By integrating language learning into engineering projects, students experience language in context, facilitating a deeper understanding of both language and subject matter (Thomas, 2010). This contextualised approach addresses the unique language needs of engineering students in Hyderabad. Collaborative project design is crucial for successful implementation of PBL in English language instruction. Teachers can design projects that require students to work in teams, encouraging language interaction and cooperation (Barron & Darling-Hammond, 2008). These collaborative efforts not only enhance language skills but also foster a sense of shared responsibility among students.

Effective assessment strategies are integral to the success of PBL. Assessments can focus on language proficiency, teamwork, and the quality of project outcomes (Krajcik et al., 1998). Rubrics tailored to language objectives ensure that both language and project-related competencies are evaluated, providing a comprehensive understanding of student performance. While PBL offers substantial benefits, challenges in implementation exist. Issues such as time constraints, teacher training, and aligning projects with curriculum goals require careful consideration (Blumenfeld et al., 1991). Addressing these challenges is essential to maximise the impact of PBL on English language instruction in Hyderabad's engineering colleges.

### **3.2. Content and Language Integrated Learning (CLIL)**

Content and Language Integrated Learning is an approach that integrates English language instruction with engineering content. By delivering subject-specific content in English, students are not only learning the language but also acquiring knowledge in their field of study. This approach ensures that students see language as a tool for learning rather than a separate subject. CLIL is an innovative approach to teaching English to engineering college students that combines language instruction with the learning of subject-specific content. It is a student-centered methodology that provides learners with opportunities to develop both their language skills and their understanding of engineering concepts simultaneously. This approach offers a holistic learning experience by focusing on the integration of language and content. In this approach, English language instruction is not treated as an isolated subject but is integrated into the engineering curriculum. Students are taught English language skills such as reading, writing, speaking, and listening, while also acquiring the technical knowledge required for their engineering studies.

One key advantage of CLIL is that it provides students with meaningful and relevant contexts for language learning. By using English as the medium of instruction for engineering subjects, students are exposed to language in authentic learning situations. They engage with technical texts, academic discourse, and engineering terminology, which not only enhances their language proficiency but also develops their subject-specific vocabulary and comprehension. Additionally, students gain confidence in using English for academic and professional purposes (Coyle et al., 2010). CLIL also promotes the development of higher-order thinking skills. Through the integration of language and content, students are encouraged to think critically, analyse information,

solve problems, and apply their knowledge in real-world situations. This cognitive engagement enhances their ability to understand and apply engineering principles while simultaneously using English to communicate their ideas effectively (Marsh, 2002).

Furthermore, CLIL fosters collaborative learning environments. Students work together, engaging in group discussions, project work, and problem-solving activities that require them to communicate and interact with their peers. This collaboration not only develops their language skills but also cultivates their teamwork, leadership, and interpersonal skills – essential qualities for future engineers (Mehisto et al., 2008). Besides, CLIL prepares students for the global job market. English is the *lingua franca* of the engineering profession, and engineers are often required to communicate with colleagues, clients, and stakeholders from diverse linguistic, regional, and cultural backgrounds. By integrating language learning with subject-specific content, CLIL equips students with the linguistic competence and intercultural awareness necessary for effective communication in a global engineering context (Coyle, 2007).

To implement CLIL successfully, teachers need to undergo training and have expertise in both language teaching and the engineering field. They should design lesson plans that incorporate language objectives aligned with the engineering curriculum, and create activities that challenge students to apply their language skills to engineering contexts. They should also provide scaffolding support to help students overcome language barriers and develop their language proficiency gradually. Therefore, CLIL is an innovative approach that effectively teaches English to engineering college students by integrating language instruction with subject-specific content. It offers a holistic learning experience that enhances students' language skills, content knowledge, critical thinking abilities, and intercultural competencies. By equipping students with both engineering and language skills, CLIL prepares them for successful careers in the global engineering industry. Therefore, implementing CLIL in English instruction in engineering colleges can greatly contribute to the comprehensive development of students' language proficiency and subject knowledge.

### **3.3. Technology-Enhanced Language Learning**

The rapid advancement of technology offers promising avenues for innovative English language teaching in engineering colleges. Integrating technology into classroom activities and assignments provides students with interactive and autonomous learning opportunities. Online platforms, language learning applications, and multimedia resources can facilitate individualised language practice foster independent learning and create an immersive language environment. Additionally, technology-mediated communication tools enable students to engage in authentic language exchanges with native speakers or English language learners from different countries, enhancing their communicative competence and intercultural understanding.

In the ever-evolving landscape of English language instruction, the integration of technology has become imperative. As engineering colleges in Hyderabad seek innovative approaches to enhance English teaching, Technology-Enhanced Language Learning (TELL) emerges as a potent strategy. TELL refers to the integration of technology tools and resources to facilitate language learning. In the specific context of engineering education, TELL holds the potential to bridge the gap between language proficiency and technical communication skills.

### 3.4. Interactive Online Platforms

#### 3.4.1. Duolingo

Duolingo, an interactive language learning platform, offers tailored lessons for English language learners. Research by Smith (2017) suggests that Duolingo's gamified approach not only enhances vocabulary and grammar but also fosters a sense of engagement and motivation among students.

#### 3.4.2. Khan Academy

Khan Academy provides a diverse range of instructional videos and exercises. In the context of English language instruction for engineering students, Khan Academy can be customised to align with technical vocabulary and communication requirements (Kim & Kwon, 2014).

#### 3.4.3. Virtual Reality (VR) and Augmented Reality (AR)

##### a) Immersive Language Experiences

Virtual Reality (VR) and Augmented Reality (AR) technologies offer immersive language experiences (Chittaro & Ranon, 2009). By simulating real-world scenarios related to engineering, VR and AR create an environment where students can practise and enhance their English communication skills within technical contexts. Chittaro and Ranon (2009) highlight the potential of VR and AR in teaching technical subjects. Integrating these technologies into English language instruction can provide engineering students in Hyderabad with a unique and engaging approach to learning language skills in their specific field.

##### b) Mobile Applications: Engaging Language Learning Apps

Mobile applications designed for language learning, such as *Babbel* and *Memrise*, provide flexibility and accessibility (Kim & Kwon, 2014). Engineering students can utilise these apps to improve their English language skills at their own pace and convenience. Customising language learning apps to include engineering-specific content ensures that students are exposed to industry-related terminology and scenarios. This targeted approach aligns language instruction with the unique needs of engineering students in Hyderabad. Incorporating technology into language learning can significantly enhance students' engagement and motivation. Online platforms, language-learning apps, and computer-assisted language learning (CALL) software provide students with interactive exercises, multimedia resources, and opportunities for self-paced learning. These technological tools can supplement traditional classroom instruction and cater to individual students' needs. While TELL offers significant advantages, challenges such as access to technology, digital literacy, and the need for teacher training must be addressed (Levy, 2009). Ensuring equitable access to technology and providing adequate support for both students and teachers is crucial for successful implementation.

### 3.5. Role-Play and Simulations

Role-play and simulations provide students with opportunities to practise their English in realistic scenarios. Engineering students can participate in scenarios that simulate job interviews, professional meetings, and presentations. This approach allows students to develop fluency, confidence, and the ability to communicate effectively in professional settings. The integration of innovative pedagogical strategies is essential for enhancing

English language instruction in engineering colleges in Hyderabad. Role-play is a pedagogical approach that involves students in simulated scenarios, encouraging them to enact roles and engage in authentic communication. In the context of English language instruction, role-play has been recognised as an effective tool for developing communication skills (Huang, 2018). By simulating workplace communication, students can enhance their ability to communicate effectively in professional settings.

Role-play fosters collaborative learning, encouraging students to work together to solve language-related challenges (Wang & Tang, 2017). This collaborative aspect aligns with the teamwork required in engineering projects and promotes a supportive learning environment. Simulations involve replicating real-world scenarios to provide experiential learning. In English language instruction for engineering students, simulations offer a unique opportunity to integrate language learning with technical content. Integrating industry-relevant simulations into language instruction exposes students to authentic engineering situations. This approach ensures that language learning is contextualised within the technical aspects of their discipline, enhancing both language and subject matter comprehension (Liu & Lu, 2012). Simulations provide a platform for practical application of language skills in engineering contexts. This hands-on experience helps students apply theoretical language knowledge to real-world situations, reinforcing language proficiency within their field. Effective implementation of role-play and simulations requires careful scenario design. Educators should tailor scenarios to reflect the language and communication challenges engineering students may encounter in their future careers (Wang & Tang, 2017).

Assessment strategies for role-play and simulations should align with language proficiency and industry-specific communication skills. Rubrics that evaluate linguistic accuracy, collaboration, and problem-solving abilities ensure a comprehensive evaluation (Huang, 2018). While role-play and simulations offer significant benefits, challenges such as scenario authenticity, student motivation, and teacher training should be addressed. Future research can explore ways to enhance the authenticity of scenarios and provide effective professional development for educators. Role-play and simulations present innovative approaches to teaching English in Hyderabad's engineering colleges. By immersing students in realistic scenarios, these strategies enhance language proficiency and bridge the gap between technical and communication skills. As Hyderabad's engineering education landscape continues to evolve, incorporating role-play and simulations into language instruction can contribute to producing well-rounded and communicatively adept engineering graduates.

### **3.6. Communicative Language Teaching (CLT)**

Communicative Language Teaching (CLT) emerges as a pedagogical framework that prioritises communication skills over rote memorisation. CLT encourages language use in authentic contexts relevant to students' future professional roles (Richards & Rodgers, 2001). In engineering colleges, incorporating CLT principles allows students to practise and enhance their English language skills in scenarios they are likely to encounter in the workplace. This approach is particularly significant for engineering students for several reasons, as it aligns with the unique needs and challenges they face in the rapidly evolving field of engineering. There are some key reasons why CLT is important for engineering students. CLT emphasises practical language use in real-world contexts. For engineering students, this means developing communication skills relevant to their future professional

settings, where effective communication is crucial for collaboration, project management, and conveying technical information to diverse audiences. Engineering projects often involve interdisciplinary collaboration. CLT fosters a collaborative learning environment, encouraging students to work together on language tasks, simulations, and role-plays. This aligns with the teamwork required in engineering projects and prepares students for effective collaboration in diverse teams.

Collaboration is a cornerstone of CLT. Engaging in communicative activities, such as problem-solving discussions and group projects, fosters teamwork and effective communication (Littlewood, 2011). This collaborative aspect aligns with the interdisciplinary nature of engineering projects. Task-Based Language Teaching, a practical application of CLT, involves learners in language tasks that reflect real-world communication needs (Willis & Willis, 2007). In engineering colleges, TBLT can be customised to integrate language tasks that align with technical content, ensuring a seamless connection between language learning and the engineering curriculum. CLT prioritises oral proficiency and fluency over mere grammar accuracy (Richards & Rodgers, 2001).

In engineering education, where effective verbal communication is essential, emphasising oral skills through role-plays, discussions, and presentations ensures that students develop the ability to articulate ideas clearly and confidently. CLT necessitates a shift from traditional, knowledge-based assessments to performance-based evaluations (Savignon, 2002). Assessments should focus on students' ability to use English in meaningful ways, such as participating in discussions, presenting technical information, and collaborating on projects. Continuous feedback and reflective practices are integral components of CLT (Littlewood, 2011). Engineering educators can provide constructive feedback to students, fostering a culture of continuous improvement in language proficiency and communication skills.

As engineering becomes increasingly globalised, engineers need to communicate effectively with colleagues, clients, and stakeholders from diverse cultural backgrounds. CLT, with its focus on communication in authentic contexts, helps students develop cross-cultural communication skills, preparing them for the international nature of the engineering profession. CLT involves learners in communicative activities that require problem-solving and critical thinking. In engineering, where problem-solving is a core skill, the activities of CLT help students apply language skills to analyse and solve technical challenges, mirroring the problem-solving skills needed in their future careers. CLT encourages continuous improvement through feedback and reflection. Engineering students can benefit from continuous feedback on their language use, allowing them to identify areas for improvement and refine their communication skills over time. As engineering graduates enter a competitive job market, effective communication skills set them apart. CLT equips students with the language proficiency and communication abilities necessary for success in job interviews, client interactions, and presentations, enhancing their employability in a global context.

A key challenge in implementing CLT in engineering education is finding a balance between language and technical content. Strategies for integrating language learning into technical courses need to be carefully designed to ensure both aspects are addressed effectively. Communicative Language Teaching offers a

transformative approach to teaching English in Hyderabad's engineering colleges. By prioritising authentic communication, collaboration, and oral proficiency, this approach aligns with the communication needs of future engineers. As Hyderabad's engineering education landscape continues to evolve, incorporating CLT principles can contribute significantly to producing graduates with the language skills necessary for success in a globalised engineering environment.

#### 4. Conclusion

Innovative approaches to teaching English in Hyderabad's engineering colleges involve a combination of pedagogical strategies, technology integration, and teacher development. By adopting innovative approaches to teaching English, Hyderabad's engineering colleges can address the language proficiency gap and better equip graduates for success in their future careers. Project-Based Learning, Content and Language Integrated Learning, Technology-Enhanced Language Learning, and Role-Play and Simulations have proven effective in improving English language proficiency. It is crucial for Hyderabad's engineering colleges to incorporate and adapt these innovative approaches in their curriculum, preparing graduates for the demands of an increasingly globalised world. Role-play and simulations present innovative approaches to teaching English in Hyderabad's engineering colleges.

As Hyderabad continues to evolve as a technological hub, implementing these innovative approaches is crucial for preparing engineering graduates with the communication skills necessary for success in the global workforce. Project-Based Learning emerges as an innovative and effective approach, which not only enhances language proficiency but also cultivates the communication skills necessary for success in the engineering profession. Innovative approaches to teaching English in Hyderabad's engineering colleges have the potential to address the language proficiency gap and equip students with the skills required for success in their future careers. It is crucial for Hyderabad's engineering colleges to adopt and adapt these innovative approaches in their curriculum to ensure graduates are better equipped for the globalised world.

#### References

- Barron, B., & Darling-Hammond, L. (2008). Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning. In *New Science of Learning: Cognition, Computers, and Collaboration in Education*, (pp. 74–96). Springer.
- Brown, H. D. (2007). *Principles of language learning and teaching*. Pearson Education.
- Blumenfeld, P., Soloway, E., Marx, R., Krajcik, J., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26(3-4), 369–398.
- Chiu, M.-H., Lee, T.-H., & Tsai, C.-C. (2016). The roles of teaching and learning argumentative writing in a project-based learning environment. *Instructional Science*, 44(3), 221–241.
- Chittaro, L., & Ranon, R. (2009). Web3D technologies in learning, education and training: Motivations, issues, opportunities. *Computers & Education*, 53(3), 1020–1027.

- Coyle, D. (2008). CLIL: A pedagogical approach. In N. Van Deusen-Scholl & N. Hornberger (Eds.), *Encyclopedia of Language and Education*, 4(2nd ed., pp. 97–111). Springer.
- Graddol, D. (2006). *English next: Why global English may mean the end of 'English as a Foreign Language.'* The British Council.
- Hampel, R., & Stickler, U. (2005). New Skills for New Classrooms: Training Tutors to Teach Languages Online. *Computer Assisted Language Learning*, 18(4), 311-326.
- Holec, S., & Curado, R. M. (2019). Pre-teaching and CLIL methodologies in engineering education: Same learning outcomes, different approaches. *Journal of Engineering Education Transformations*, 240(1), 71-75.
- Huang, Y. (2018). The role of role-play in an EFL oral communication course: A case study. *The Asian EFL Journal Quarterly*, 20(3), 191–213.
- James, C., & Chen, C. (2018). The power of simulation: A Chinese perspective. *International Journal of Simulation and Process Modelling*, 13(1), 1-8.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (2009). Cooperation in the classroom. *Association for Supervision and Curriculum Development*.
- Kim, P., & Kwon, K. (2014). Investigating learners' attitudes toward a mobile-based language learning application. *Computer Assisted Language Learning*, 27(3), 263–280.
- Krajcik, J., Blumenfeld, P., Marx, R., Bass, K., Fredricks, J., & Soloway, E. (1998). Inquiry in project-based science classrooms: Initial attempts by middle school students. *Journal of the Learning Sciences*, 7(3-4), 313–350.
- Kumar, P., & Sharma, S. (2015). Impact of project-based learning on the enhancement of English speaking skills in engineering students. *International Journal of Engineering Education*, 31(6), 1651-1660.
- Levy, M. (2009). Technologies in use for second language learning. *The Modern Language Journal*, 93(s1), 769–782.
- Li, L. (2013). Teacher–engineer collaboration in curriculum design. *Engineering Studies*, 5(2), 97–115.
- Littlewood, W. (2011). Communicative and task-based language teaching in East Asian classrooms. *Language Teaching*, 44(1), 77–104.
- Liu, Y., & Lu, Y. (2012). Teaching English for specific purposes through simulation-based learning. *International Journal of English Language Teaching*, 1(1), 61–70.
- Richards, J. C., & Rodgers, T. S. (2001). *Approaches and methods in language teaching*. Cambridge University Press.
- Savignon, S. J. (2002). Communicative language teaching: Linguistic theory and classroom practice. In J. C. Richards & W. A. Renandya (Eds.), *Methodology in language teaching: An anthology of current practice* (pp. 241–250). Cambridge University Press.
- Smith, A. N. (2017). Evaluating Duolingo: Does it actually work? *Dartmouth Undergraduate Journal of Science*, 9(1).

- Smith, L., Sauro, S., & Zhang, L. J. (2013). Rethinking the CALL curriculum in engineering education: An exploratory study. *CALICO Journal*, 30(1), 75-96.
- Thomas, J. W. (2000). A review of research on project-based learning. *San Rafael, CA: The Autodesk Foundation*.
- Thomas, J. W. (2010). *Project-based learning. Educational Leadership*, 68(1), 34–37.
- Thomas, J. W. (2010). A review of research on project-based learning. *The Autodesk Foundation*. Retrieved from <https://www.bie.org/research-study/P1>
- Velayutham, S., Jeyaraj, M., & Manikantan, M. (2016). Effectiveness of online language learning platforms in developing English language skills in engineering students. *International Journal of Educational Technology in Higher Education*, 13(1), 37.
- Wang, C., & Tang, Y. (2017). A review of research on role-play in English language teaching. *English Language Teaching*, 10(2), 1–8.
- Willis, D., & Willis, J. (2007). *Doing task-based teaching: A practical guide to task-based teaching for ELT training courses and practicing teachers*. Oxford University Press.

