

Enhancing Technical English Proficiency: A Video-Based Approach for Female Students at Industrial Colleges in Saudi Arabia

Dr. Samah Abduljawad¹

¹ English Department, Yanbu Industrial Colleges and Institutes, RC, Saudi Arabia

Correspondence: Dr. Samah Abduljawad, English Department, Yanbu Industrial Colleges and Institutes, RC, Saudi Arabia.
E-mail: samahabduljawad@gmail.com

Received: February 28, 2024

Accepted: May 14, 2024

Online Published: June 3, 2024

doi:10.5430/wjel.v14n5p250

URL: <https://doi.org/10.5430/wjel.v14n5p250>

Abstract

This research used constructivist theory and socio-cultural perspectives to investigate how video-based learning affected the technical English ability of female students at Yanbu Industrial College. The study involved 60 Saudi female ESL students at the intermediate English level, who were chosen through convenience sampling to participate. The study promoted tailored strategies to enhance language acquisition by highlighting the need for focused interventions to close the gap between acknowledged advantages and the real use of video resources. Utilizing a mixed-method approach, the study assessed students' perceptions of and experiences with video materials. Only 15% of respondents actually used instructional videos, despite the fact that a considerable 92% of respondents acknowledged the need for help in Technical English. This indicates a major disconnect between perceived requirements and actual use. During the intervention, observations revealed a changed classroom setting that featured dynamic, multimedia-driven learning in place of conventional teaching techniques. In order to improve language competency, this research highlighted the need to align identified demands with useful resource utilization. It also offers critical insights into effective instructional methodologies.

Keywords: language competency, socio-cultural barriers, video-based learning

1. Introduction

Technical English proficiency is increasingly important in industrial education as the global workplace becomes more interconnected (Kassim & Ali, 2010). The ability to communicate effectively in English has become essential for participation in international trade, research collaborations, and technical training (Batova, 2018). In Saudi Arabia, the shift toward a knowledge-based economy has heightened the demand for graduates skilled not just in their technical fields but also in professional communication in English (Alshumaimeri, 2019).

However, studies have found that English proficiency among Saudi students, especially females, needs to catch up to mastery of technical skills due to weaknesses in the education system. While English is taught starting in elementary school, instruction has traditionally emphasized grammar rules over practical language use (Al-Qahtani, 2018; Aleissa, 2018).

Additionally, socio-cultural barriers have limited females' exposure to English outside the classroom compared to males in Saudi Arabia. These barriers involve limited females' English exposure compared to males (Altamimi, 2014). This gender gap undermines development goals. Traditionally, males are viewed as breadwinners while females are caregivers, discouraging career pursuit and limiting English learning time for females (Sani, 2018). Strict gender segregation laws also restrict females' interactions with English speakers outside classrooms. However, there is growing recognition of the importance of technical English for females (Al-Zahrani, 2019). The Vision 2030 of Saudi Arabia aims to empower women as the economy diversifies into new industries requiring technical skills (Topal, 2019). More females now enter the workforce and technical college departments. Technical English allows better job access, especially in fields like engineering, science, and technology (Sani, 2018). It also aids career development through improved collaboration and technical documentation comprehension. Females can contribute significantly to Saudi Arabia's progress by learning technical English and playing a vital role in its growth (Al-Nujaidi, 2003).

Addressing the English gender gap by expanding learning opportunities and encouraging technical careers can unleash females' full potential to achieve Saudi Arabia's economic and social transformation. This gender gap in English ability threatens to undermine Saudi Arabia's efforts to diversify its economy and increase workforce participation rates. Video-based learning is well-suited as a supplemental approach to closing this gap. According to the cognitive theory of multimedia learning, humans process verbal and visual information through separate channels that are limited in capacity (Theimer, 2019). By presenting words and pictures concurrently rather than successively, multimedia design alleviates excessive demands on either channel alone. Videos allow the layering of audio narration and on-screen text with vivid visual demonstrations of technical processes and workflows (Umutlu & Akpınar, 2020). This utilization of both verbal and pictorial codes engages dual-coding theory, facilitating deeper understanding and longer retention of content compared to words alone (Lee & Kim, 2020).

Furthermore, constructivist learning theory posits that students actively construct knowledge by manipulating real-world experiences (Hein, 1991). Videos simulate authentic contexts by visually recreating industrial settings and capturing industry speakers' accents and idioms. This provides exposure to language as it is naturally used in technical fields. Such virtual experiences help build vocabulary and communication skills without requiring costly field trips or workplace internships, expanding access for students restricted by societal or geographic barriers.

In essence, the objective of this study is to explore the impact of video-based learning on the technical English proficiency of female students who are new to studying technical fields in Saudi Arabia. The research question of this study is: What is the impact of video modules on developing female students' technical English skills at Yanbu Industrial College? A pre-intervention survey has assessed initial proficiency levels. A video-based intervention is supplemented to coursework with targeted multimedia content implemented on the selected sample. Lastly, classroom observations of the intervention evaluated changes in technical vocabulary, workplace communication abilities, and confidence in applying the video-based learning approach to enhance technical English proficiency in females compared to traditional methods. The study findings guided the effective integration of video-enabled language instruction into vocational curricula (Carnegie et al., 2020). The findings guided the effective incorporation of multimedia, especially video, into technical English education to strengthen learning outcomes and prepare more Saudi graduates, especially females, to succeed in a globally competitive job market. Addressing existing language deficiencies could accelerate workforce development goals and promote greater social participation of qualified female talent (Salami et al., 2020).

2. Literature Review

2.1 *Technical English Proficiency in Educational Settings and Gender Disparities in Saudi Arabia*

Technical English proficiency has gained increased focus in educational research due to its importance for workforce readiness. Studies show that competency in English for technical communication and training is now a core competency sought by employers globally (Fathali & Emadi, 2022). While content mastery remains important, the ability to comprehend and discuss technical information in English is critical for safety and productivity in industries such as engineering, healthcare, and transportation.

Cognitive theories lend insight into effective technical English learning. For example, multimedia learning theory explains that integrating words and pictures yields a better understanding than words alone by engaging dual channels of verbal and visual processing. The constructivist learning theory also emphasizes building knowledge through authentic experiences (Hein, 1991). When applied to technical content, these theories support incorporating interactive virtual experiences through multimedia to reinforce vocabulary and communicative functions.

Research on technical English education in Saudi Arabia has consistently found it poses particular challenges for female students. Sociocultural factors limit real-world exposure outside classrooms relative to male peers. Classroom instruction also tends to focus on grammar over practical skills. As a result, studies find that technical English proficiency lags most significantly among Saudi female students.

This endangers workforce equity goals, as qualified women miss opportunities due solely to language barriers. While scholarships now fund more women in STEM programs domestically and abroad, language deficiencies undermine related degree and career prospects (Sithole et al., 2017). Addressing the proven socioeconomic benefits of female workforce participation is critical to realizing Saudi Arabia's Vision 2030 reforms (Mitchell & Alfuraih, 2018). Targeted interventions leveraging principles of cognitive learning theory are needed to strengthen female students' technical English skills and opportunities. In summary, this literature review provided an overview of the importance of technical English proficiency supported by cognitive learning theories and highlighted gender-specific challenges faced by Saudi female students according to recent research. Strengthening technical English education is imperative for equitable workforce development nationally.

2.2 *Technical English Proficiency in Educational Settings and Its Gender-Specific Challenges in Saudi Context*

Technical English proficiency has gained increased focus in educational research due to its importance for workforce readiness. Alghamdi (2022) illustrated that the competency in English for technical communication and training is now a core competency sought by employers globally. While content mastery remains important, the ability to comprehend and discuss technical information in English is critical for safety and productivity in industries such as engineering, healthcare, and transportation (Albahiri & Alhaj, 2023).

Furthermore, traditional classroom instruction also tends to focus on grammar over practical skills. As a result, studies find that technical English proficiency lags most significantly among Saudi female students (Alshammari, 2020). This endangers workforce equity goals, as qualified women miss opportunities due solely to language barriers. While scholarships now fund more women in STEM programs domestically and abroad, language deficiencies undermine related degree and career prospects (Altheyab & Alalwi, 2022). Addressing proven socioeconomic benefits of female workforce participation is critical to realizing Saudi Arabia's Vision 2030 reforms (World Bank, 2020). Targeted interventions leveraging principles of cognitive learning theory are needed to strengthen female students' technical English skills and opportunities.

In summary, this literature review provided an overview of the importance of technical English proficiency supported by cognitive learning theories and highlighted gender-specific challenges faced by Saudi female students according to recent research. Strengthening technical English education is imperative for equitable workforce development nationally.

2.3 Advantages of Video-Based Learning in Technical English Acquisition

Video-based instruction holds promise as an effective supplemental approach for building technical English proficiency. Previous research has demonstrated several benefits of incorporating videos into language education (Altheyab & Alalwi, 2022). According to dual coding theory, multimedia design engages both auditory and visual channels to facilitate deeper encoding and retrieval of information compared to verbal-only methods. Videos allow rich demonstrations of processes through dynamic imagery paired with narration.

Studies have validated videos' instructional advantages. In a study of 92 Spanish learners, those assigned video listening exercises outperformed audio-only and text-based groups on proficiency tests (Guan, 2019; Huang, 2021). Videos built engagement through visual appeal and authentic accents while reinforcing comprehension. Similar results were found in a Japanese learning experiment where students analyzed grammar patterns in video conversations more accurately than from textbooks alone.

Multimedia principles from the cognitive theory of multimedia learning also inform effective video design. Segmenting complex concepts, adopting a conversational style, signaling key ideas, and carefully aligning words and images are evidenced to support learning when applied. Videos allow visible manipulation of technical systems, parts identification through close-up lenses, and opportunities to review difficult segments individually (Santos, 2019).

Observing expert technical communication models through video enables social learning processes. Videos stimulate group learning by providing a springboard for discussion. In studies evaluating cooperative viewing, students demonstrated more critical thinking and willingness to practice language skills together. In conclusion, established learning theories and experimental evidence collectively point to substantial pedagogical benefits of video-based methods for developing technical English communication abilities when their principles are properly implemented. This review highlighted several powerful reasons why videos merit consideration in language education.

2.4 Theoretical Framework

This study's conceptual underpinning fuses constructivist theory with socio-cultural perspectives to elucidate how purposefully designed video modules may optimize technical English acquisition among female trainees at Yanbu Industrial College. Constructivism positions the learner as an active understanding builder through interactions within their milieu (Hein, 1991). Within the intervention's video-centric model, this asserts that enrichment occurs as students deeply engage in technical nomenclature through experiential simulations. Immersing pupils in authentic industrial settings links theoretical training with real-world application, facilitating linguistic incorporation.

Concurrently, socio-cultural viewpoints recognize cultural and social determinants that impact erudition. In Saudi's gender-distinct environment, restrictions beyond the classroom particularly impair feminine English exposure. Integrating this perspective allows for scrutinizing challenges confronting female members and customizing remediation addressing their societal positioning (Alghamdi & Azam, 2018).

Ultimately, the symbiotic framework robustly elucidates how video-centric pedagogy may remedy linguistic acquisition obstacles through immersive experiences while acknowledging socio-cultural forces molding the learning atmosphere. This aligns with precedents corroborating video-led interventions' proficiency among language learners and diverse communities. A dexterous, metatheoretical grounding thus optimizes comprehending technical English progress amid specialized multimedia instruction.

3. Research Method

3.1 Research Design

The current study has utilized a mixed-method approach, embracing a pragmatic research paradigm (Harris-Lovett et al., 2019). This design involved both qualitative and quantitative methodologies to holistically investigate the efficacy of using videos to enhance technical English proficiency among female students at Yanbu Industrial College in Saudi Arabia. The mixed-method approach included the concurrent collection and analysis of qualitative and quantitative data. This approach integrates the strengths of both methodologies, offering a more comprehensive understanding of the impact of video-based learning on technical English proficiency.

The qualitative approach enables the exploration of students' subjective experiences and perceptions regarding video-based learning (Kluffmann et al., 2019). The primary instrument, a structured questionnaire, gathers rich, detailed insights into the students' attitudes, challenges, and benefits associated with video-based technical English learning. Alongside this, qualitative measures are employed to assess the impact of video-based learning on technical English proficiency. Pre- and post-intervention proficiency tests, aligned with the specific technical English skills covered in the videos, provide numerical data on skill improvement. These assessments will quantify the effectiveness of the intervention and its impact on the student's language proficiency levels.

3.2 Sample and Data Collection

The sample group comprises 60 female students, aged between 19 and 23, enrolled in the third year at Yanbu Industrial College. These students have an upper-intermediate level of English proficiency and are transitioning from Arabic-based instruction to English for technical subjects. This sample is purposefully chosen to represent the specific demographic under study and their relevance to the research objectives. The focus on female students aims to address gender-specific challenges in language acquisition and the potential benefits of video-based learning in this context.

The study's data collection went over three phases. In the first stage, participants were asked to complete a survey about their perceptions and experiences regarding video-based learning. As mentioned in the introduction, this study aimed to investigate the efficiency of using

videos to enhance technical English proficiency. In the second phase, participants were observed using video-based learning in ESL classrooms to get a deep understanding of the impact of video-based learning on technical English proficiency among female students in Saudi Arabia. Students were confronted with different kinds of videos during the intervention and were assessed via many ESL quizzes. All participants were asked to sign the consent form before participating in this study. They were also reminded of their right to withdraw from the study at any point. Lastly, the researcher marked female students' responses to the survey and then compared their results with classroom observations to investigate the effectiveness of the intervention and its impact on the student's language proficiency levels.

3.3 Data Analysis and Results

3.3.1 Pre-Intervention Survey

The findings of the survey provided valuable insights into the students' views on learning Technical English through video. Most respondents had studied English for around 12 years, but their experience with Technical English specifically ranged from 1 to 3 years. This suggests their English education had more recently concentrated on this specialized field. The responses captured the students' perspectives on their Technical English learning journey and use of video resources in a holistic manner.

The findings also revealed some interesting discrepancies. An impressive 92% of respondents felt they needed help learning Technical English, indicating widespread recognition of the difficulty of this specialized subdomain. However, only 15% had made use of instructional videos, suggesting a gap between the perceived need and actual utilization of available resources. The vast majority, at 85%, had yet to tap into video-based learning at all, instead relying predominantly on more conventional methods. This divergence between expressed needs and current behaviors points to a potential opportunity to promote video options better and raise awareness of their applicability and benefits for Technical English acquisition. Further exploration is warranted into the factors inhibiting greater video adoption in order to address barriers and optimize the uptake of this promising learning medium.

The survey findings also revealed opportunities to support students' independent online learning better. Over 51% of respondents reported familiarity with downloading videos utilizing tools like BitTorrent, VLC downloader, or YouTube downloader., indicating an openness to digital content. However, awareness of specialized download tools like Real Downloader was just 5%, suggesting a need for targeted guidance on learner-optimized options such as Real Video Downloader. While most students needed to gain prior knowledge of the Technical English videos presented, an overwhelming majority felt they would provide benefits, as 88% of the students needed to become more familiar with technical English learning video sites. Additionally, despite novelty, confidence in independent use was 99%, demonstrating motivation and a need for exposure to a wider range of resources. The disconnects between present understanding, perceived usefulness, and confidence imply that students may need access to the full spectrum of available materials. Strategically promoting tailored online resources has the potential to strengthen autonomous learning by connecting students with optimally suited content.

The findings reveal inconsistencies between perceived value and practical implementation that warrant cautious interpretation. While most recognized videos' prospective advantages, reported use did not match this optimism. A discrepancy exists between acknowledged helpfulness and actual engagement. Before concluding this signal, a need for heightened promotion, a deeper qualitative and quantitative examination of influential factors is prudent. Do perceptions align with intrinsic motivations for learning in this medium? Could resource limitations, preferences, or other constraints better explain underutilization? A diagnosis of insufficient awareness risks overlooking nuances. Rather than assuming that an information deficit alone discourages consumption, a rigorous exploration of perceptions, materials, individual differences, and barriers is necessary. Only through robust analysis can we understand motivations and obstacles. With a more comprehensive picture, targeted solutions addressing root causes, not just symptoms, can be developed to bridge attitude and behavior meaningfully.

3.3.2 Implementation and Observation of the Intervention

The researcher's keen observations during the students' video-based learning sessions unveiled a dynamic and engaging classroom environment. The profound silence enveloping the classroom indicated the students' complete immersion in the video content, focusing intently on the screen. Notably, the videos featured presenters adeptly articulating technical English words and sentences. These linguistic elements were thoughtfully presented in both English and Arabic scripts, along with translations in Arabic, encouraging a multifaceted approach to language comprehension. What stood out prominently was the active involvement of students, mirroring the presenter's speech by enthusiastically repeating words and sentences, signifying their eagerness to engage with the material. The classroom ambiance exuded vibrancy and liveliness, evidenced by the abundant smiles and gestures observed among the students. Their evident enjoyment and enthusiastic participation demonstrated an appreciation for this unique form of learning. This interactive approach instilled a sense of enthusiasm and zeal for the subject matter, rendering the learning process more engaging and dynamic.

The transformation in the researcher's role from a mere facilitator to a dynamic teacher-facilitator was particularly noteworthy. Instead of monotonously uttering phrases or sentences repeatedly, the introduction of video content evolved into an effective teaching assistant. This shift liberated the researcher from repetitive tasks, allowing for a more interactive and engaging instructional role. Consequently, this transition garnered immense interest and enthusiasm among the students, who actively participated in the learning process.

This shift from traditional teaching methods to an interactive, multimedia-based approach not only relieved the teacher's burden but also markedly enhanced the students' engagement and enthusiasm for learning. The seamless integration of visual and verbal cues, supported by bilingual presentation, resonated well with the students, fostering an environment that encouraged active participation and reinforced their

understanding of technical English concepts. In essence, the classroom dynamic was transformed by the incorporation of multimedia learning methods. The engagement level increased significantly as students embraced this innovative approach, contributing to a more vibrant, interactive, and effective learning environment. The researcher's altered role, from a mere instructor to a facilitator of a multimedia-driven learning environment, proved instrumental in fostering an enthusiastic and participative atmosphere among the students.

To sum up, the findings suggest a need for a video-based learning intervention strategy for learning technical English, which is implemented among the students who participated in the survey. Participation is encouraged through the use of multimedia learning with lively presenters and scripts in both Arabic and English. Repetition of words and sentences from the videos by students with enthusiasm is encouraged to promote language practice and retention. Furthermore, the researcher-turned-teacher's facilitation function is in line with a learner-centered approach, making good use of technology as a teaching helper. This intervention boosts student engagement and excitement by fostering a dynamic learning environment. Visual aids, script translations, and active engagement all work together to provide a fun and engaging learning environment that encourages students to participate in the educational process and acquire new languages actively.

4. Discussion

The pre-intervention survey findings provide a multifaceted understanding of students' engagement with Technical English learning through video resources. These results underscore a notable discrepancy between perceived needs and actual utilization of available video-based learning resources. While a vast majority of respondents (92%) recognized the necessity for assistance in learning Technical English, only a minority (15%) had actively used instructional videos. This disjunction between acknowledged necessity and the practical application indicates a significant opportunity to enhance students' awareness and engagement with video resources.

Moreover, combining the study findings with constructivist theory illustrates the students' evolving experience in technical English learning. The discrepancy between the recognized need for support and the limited utilization of available video resources suggests an evolving construct of the student's learning environment (Paas & Sweller, 2012). As posited by Hein (1991), the constructivist theory emphasizes that learners actively construct knowledge through experiences. In this context, the student's recognition of the potential benefits of video resources implies a changing perception and adaptation to new learning methods.

The substantial gap between recognition of video benefits and actual usage is indicative of the need for tailored interventions. The proposed video-based learning intervention aligns with the findings, aiming to address the discrepancies observed in the survey. The intervention focuses on multimedia learning, enabling visual aids, script translations, and active engagement, fostering a dynamic and engaging learning environment (Huang, 2021). This approach correlates with the constructivist theory, emphasizing learning through experiential simulations. It also supports the Socio-Cultural Perspective theory by introducing culturally suitable methods that encourage participation despite potential societal barriers (Kalamas Hedden et al., 2017).

The discrepancy observed between recognizing the utility of videos and actual engagement emphasizes the need for a comprehensive understanding of factors inhibiting greater utilization. Further exploration is required to identify barriers and preferences that hinder video uptake. A targeted approach can be devised by considering the theories of socio-cultural perspective and constructivist theory. This could involve initiatives that align with cultural norms and effectively engage students in their learning environment. Furthermore, the intervention's focus on enhancing student engagement through enthusiastic repetition of technical English words and sentences aligns with the constructivist theory's emphasis on active participation in learning. It also reflects a response to the students' identified need for assistance in learning Technical English, as per the socio-cultural perspective theory, by providing an innovative yet suitable educational method. As a whole, the survey's findings highlight the need to bridge the gap between perceived benefits and practical utilization of video resources. In line with the socio-cultural perspective and constructivist theories, the proposed intervention aims to address this disparity by providing culturally sensitive and actively engaging learning approaches for Technical English proficiency among the students.

5. Conclusion

The study uses a mixed-method approach to examine the influence of video-based learning on technical English ability. The findings showed a disparity between the reported requirements and the use of videos, suggesting that students need to improve their knowledge of and interaction with video materials. The study supported constructivist and sociocultural perspectives, highlighting social hurdles to nontraditional learning and students' changing attitudes toward video media. Societal barriers restrict exposure to English outside the classroom, which resonates with the survey's indications of limited video-based learning uptake. Socio-cultural influences, especially in a conservative society like Saudi Arabia, could hinder the adoption of unconventional learning methods despite recognizing their benefits (Anas, 2020). In order to address the inequities found in the survey, a video-based intervention was implemented, with an emphasis on student participation and culturally appropriate techniques. Observations revealed a vibrant, dynamic classroom that was redefining traditional instruction through the use of multimedia.

Based on the results, the study highlights the need to close the gap between the perceived advantages and actual use of video resources, with a focus on customized interventions to improve educational outcomes. The study can offer valuable insights into the potential of video-based approaches to develop technical English proficiency among female learners at Saudi Colleges. It can also contribute to the broader discourse on innovative teaching approaches for promoting gender-inclusive education in technical fields. Lastly, some practical suggestions for integrating video-based learning into the curriculum of Saudi colleges may include providing access to technology resources, training faculty members, and creating a supportive learning environment.

Acknowledgments

I would like to express my gratitude to Yanbu Industrial College for allowing me to conduct this study with its students.

Funding

Not applicable

Competing interests

The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Sciedu Press.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer-reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

Open access

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).

Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

References

- Albahiri, M. H., & Alhaj, A. A. M. (2023). *Teachers in the Twenty-first Century and Challenges of Technological Innovation in Teaching and Learning*. *Journal of Positive Psychology and Wellbeing*, 836-852. Retrieved from https://www.researchgate.net/publication/368660379_Teachers_in_the_Twenty-first_Century_and_Challenges_of_Technological_Innovation_in_Teaching_and_Learning
- Aleissa, D. I. (2018). *The effect of technology on Saudi female Students learning English as a foreign/second language*. King Abdul-Aziz University Press. Retrieved from https://www.academia.edu/67828488/The_Effect_of_Technology_on_Saudi_Female_Students_Learning_English_as_a_Foreign_Sec ond_Language?uc-sb-sw=16577414
- Alghamdi, A., & Azam, S. (2018). *Differentiation in Saudi pre-service science teacher program*. *Journal of Baltic Science Education*, 17(3), 428.
- Alghamdi, N. (2022). *EFL Teachers' perceptions on the implementation of mobile-assisted language learning in Saudi Arabia during COVID-19: challenges and affordances*. *Journal of Language Teaching and Research*, 13(1), 92-100. <https://doi.org/10.17507/jltr.1301.11>
- Al-Nujaidi, A. H. (2003). *The relationship between vocabulary size, reading strategies, and reading comprehension of EFL learners in Saudi Arabia*. Oklahoma State University. Retrieved from <https://shareok.org/bitstream/handle/11244/44607/Thesis-2003D-A452r.pdf?sequence=1>
- Al-Qahtani, H. M. (2018). *Exploring students' weaknesses in English language at Shaqra University (Hurimlaa Campus), Saudi Arabia*. *International Journal of Social Sciences*, 3(3), 1299-1319. Retrieved from <https://grdspublishing.org/index.php/people/article/view/1295>
- Alshammari, S. R. (2020). *Writing to Learn or Learning to Write. A Critical Review of "English as a Foreign Language"(EFL) Teaching Practices in Writing in Saudi Universities*. King Saud University Press.
- Alshumaimeri, Y. A. (2019). *English language teaching in Saudi Arabia: An introduction*. King Saud University Press. Retrieved from https://www.researchgate.net/publication/357553748_English_Language_Teaching_in_Saudi_Arabia_An_Introduction

- Altamimi, A. M. (2014). *Challenges experienced by Saudi female students transitioning through Canadian pre-academic ESL Mount Saint Vincent University*. Retrieved from <https://ec.msvu.ca/server/api/core/bitstreams/3f03ab7c-f321-411d-89f4-8967e7e762a4/content>
- Altheyab, N. A., & Alalwi, F. S. (2022). *English-Medium Instruction and Content Learning in Freshman Year: An Investigation of a Saudi University Students' Challenges and Learning Strategies*. *Arab World English Journal*, 12(6), 1925-0703. <https://doi.org/10.5430/wjel.v12n6p71>
- Al-Zahrani, M. (2019). *Investigating Saudi English Usage in Saudi Comedy Club: A Socio-Linguistic Study*. King Abdul Aziz University. Retrieved from https://www.kau.edu.sa/Show_Res.aspx?Site_ID=306&LNG=EN&RN=72685
- Anas, A. (2020). *Perceptions of Saudi Students to Blended Learning Environments at the University of Bisha, Saudi Arabia*. *Arab World English Journal*, 6, 261-277.
- Batova, T. (2018). *Global technical communication in 7.5 weeks online: Combining industry and academic perspectives*. *IEEE transactions on professional communication*, 61(3), 311-329. Retrieved from <https://ieeexplore.ieee.org/document/8384020>
- Carnegie, M., Cornish, P. S., Htwe, K. K., & Htwe, N. (2020). *Gender, decision-making and farm practice change: An action learning intervention in Myanmar*. *Journal of Rural Studies*, 78, 503-515. <https://doi.org/10.1016/j.jrurstud.2020.01.002>
- Fathali, S., & Emadi, A. (2022). *Purpose, Outcome, and Methodology in Computer-Assisted Language Learning Publications: A Systematic Review*. *JALT Journal*, 18(2), 21-237.
- Guan, Y. (2019). *EFL listening development through diagnosis: an assessment-based study of listening sub-skills using Rasch measurement* James Cook University.
- Harris-Lovett, S., Lienert, J., & Sedlak, D. (2019). *A mixed-methods approach to strategic planning for multi-benefit regional water infrastructure*. *Journal of Environmental Management*, 233, 218-237. <https://doi.org/10.1016/j.jenvman.2018.11.112>
- Huang, H.-W. (2021). *Effects of smartphone-based collaborative vlog projects on EFL learners' speaking performance and learning engagement*. *Australasian Journal of Educational Technology*, 37(6), 18-40.
- Kalamas Hedden, M., Worthy, R., Akins, E., Slinger-Friedman, V., & Paul, R. (2017). *Teaching sustainability using an active learning constructivist approach: Discipline-specific case studies in higher education*. In: MDPI.
- Kassim, H., & Ali, F. (2010). *English communicative events and skills needed at the workplace: Feedback from the industry*. *English for specific purposes*, 29(3), 168-182.
- Klummann, C., Sassen, R., & Gansel, E. (2019). *Structural key factors of participatory sustainability reporting for universities*. *International Journal of Sustainability in Higher Education*, 20(6), 1080-1098.
- Lee, A., & Kim, M. G. (2020). *Effective electronic menu presentation: From the cognitive style and mental imagery perspectives*. *International Journal of Hospitality Management*, 87, 102377.
- Mitchell, B., & Alfuraih, A. (2018). *The Kingdom of Saudi Arabia: Achieving the aspirations of the National Transformation Program 2020 and Saudi vision 2030 through education*. *Journal of Education and Development*, 2(3), 36.
- Paas, F., & Sweller, J. (2012). *An evolutionary upgrade of cognitive load theory: Using the human motor system and collaboration to support the learning of complex cognitive tasks*. *Educational Psychology Review*, 24, 27-45. Retrieved from <https://link.springer.com/article/10.1007/s10648-011-9179-2>
- Salami, B., Mason, A., Salma, J., Yohani, S., Amin, M., Okeke-Ihejirika, P., & Ladha, T. (2020). *Access to healthcare for immigrant children in Canada*. *International Journal of Environmental Research and Public Health*, 17(9), 3320.
- Sani, M. (2018). *Women's Representation in STEM Related Education and Careers: A Case Study of Female University Students in Saudi Arabia* Staffordshire University. Retrieved from https://eprints.staffs.ac.uk/5825/1/SaniM_Thesis.pdf
- Santos, J. M. (2019). *Anatomy of instructional videos: a systematic characterization of the structure of academic instructional videos*. Retrieved from <https://documat.unirioja.es/servlet/tesis?codigo=288119>
- Sithole, A., Chiyaka, E. T., McCarthy, P., Mupinga, D. M., Bucklein, B. K., & Kibirige, J. (2017). *Student attraction, persistence and retention in STEM programs: Successes and continuing challenges*. *Higher Education Studies*, 7(1), 46-59.
- Theimer, S. (2019). *Expanding libraries' application of Mayer's cognitive theory of multimedia learning*. *Library Management*, 40(6/7), 478-482. <https://doi.org/10.1108/LM-08-2018-0067>
- Topal, A. (2019). *Economic reforms and women's empowerment in Saudi Arabia*. *Women's Studies International Forum*.
- Umutlu, D., & Akpınar, Y. (2020). *Effects of different video modalities on writing achievement in flipped English classes*. *Contemporary Educational Technology*, 12(2). <https://doi.org/10.30935/cedtech/7993>