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A Brief Overview of Gender Differences in International Languages

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ABSTRACT

This study evaluates the validity and practicality of a novel technology-based e-learning system developed explicitly for language research methods in higher education. Recognizing the promising potential of integrating e-learning with corpus linguistics principles, the research focused on designing and assessing tools for teaching corpus linguistics-based language research. Validity was determined by examining the alignment of the e-learning content with fundamental corpus linguistic principles and established research methodologies. Practicality was assessed based on the platform's usability, accessibility, and the overall feasibility of its tools for both educators and students. Observations revealed positive adaptation from both instructors and learners, with lecturers effectively integrating diverse features and students actively utilizing the platform to access materials, collaborate, and interact. The findings confirm the success of this approach, evidenced by positive feedback regarding content clarity, relevance, and applicability. Furthermore, the e-learning media demonstrated high practicality, as indicated by both teacher and student responses. Overall, these results indicate significant potential for

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this e-learning system to enhance learning effectiveness, particularly in language research methods, thereby advancing empirical language studies within digital environments. This research contributes to the growing body of literature on effective technology integration in linguistics education.

Keywords: E-Learning; Validity; Practicality; Language Learning

1. Introduction

Language learning represents a complex cognitive and social process influenced by a variety of interrelated factors, including cultural background, individual motivation, and the specific strategies employed by learners. These variables function interactively, shaping the mechanisms by which individuals acquire additional languages. Among these, gender has consistently emerged as a salient variable, with empirical studies demonstrating that male and female learners frequently adopt differing approaches and display unique patterns in linguistic acquisition. Research has indicated that gender-based distinctions manifest in the choice of learning strategies, levels of motivation, and overall language performance. Specifically, female learners have been observed to utilize a broader range of strategies, particularly those of a metacognitive and affective nature, including planning, self-regulation, and emotional monitoring, all of which are associated with improved learning outcomes^[1-3]. In contrast, male learners more commonly rely on memory-based and cognitive strategies that may support discrete task performance but are less conducive to sustained proficiency^[2, 4]. Motivational orientation has also been linked to gender differences, with female learners typically exhibiting a stronger inclination toward intrinsic motivation, characterized by personal interest, satisfaction, and a desire for communicative competence^[5, 6]. This contrasts with male learners, who are more frequently influenced by extrinsic motivators such as academic achievement or career advancement^[7, 8]. Such motivational discrepancies may contribute to the generally more positive attitudes toward language learning observed among females, particularly in contexts involving digital tools and platforms. It has been noted that female learners are more inclined to incorporate technology into their language study routines, which may enhance engagement and academic performance^[5, 9]. Cognitive load is another domain in which gender-based differences have been identified. Female learners often report higher levels of mental

effort in language learning tasks, especially those involving digital environments^[6, 10]. Despite this, they appear more adept at managing cognitive demands through strategies such as time management, segmentation of tasks, and increased frequency of practice, which enable them to achieve superior outcomes in both traditional and technology-enhanced learning contexts^[11]. These findings indicate that gender-related disparities in language learning outcomes are not solely attributable to inherent capability but are also shaped by differences in strategic behavior and cognitive regulation. The current investigation builds upon this body of research by exploring gender-specific patterns in language development across a range of sociocultural and educational environments. Synthesizing data from previous empirical studies, the aim is to provide a comprehensive understanding of the influence of gender on language learning processes and outcomes. This includes an analysis of learning strategies, motivational profiles, and cognitive load management, with the ultimate goal of informing educational policies and pedagogical approaches that address gender-related disparities^[12]. Furthermore, this research emphasizes the necessity of considering gender as a dynamic and context-dependent variable in second language acquisition. In light of ongoing developments in digital education and shifting societal norms, understanding how gender influences language learning is increasingly relevant for educators and curriculum developers. A nuanced approach to gender-sensitive instruction, grounded in empirical evidence, can foster more inclusive and effective language learning environments^[13].

1.1. Research Objectives

- To identify the major gender differences in language learning strategies.
- To analyze the motivational factors driving language acquisition across genders.
- To explore how gender influences cognitive load and performance in language learning.

- To discuss the implications of these differences for language education policies and teaching practices.

A considerable body of research has investigated gender differences in second language acquisition (SLA) across diverse socio-cultural and educational contexts^[14, 15]. These studies consistently demonstrate that male and female learners employ different strategies, display varying levels of motivation, and achieve distinct performance outcomes. Female students tend to adopt a broader range of language learning strategies, notably metacognitive strategies such as planning, monitoring, and self-evaluating, as well as affective strategies focused on emotional regulation and motivational support^[16]. This strategic diversity enables a more holistic approach to language learning, often leading to enhanced long-term retention and higher proficiency. In contrast, male learners are more likely to rely on memory-based and cognitive strategies, which, while effective for tasks like rote memorization, may not foster deep comprehension or communicative fluency^[17]. These differences are well aligned with findings grounded in Self-Determination Theory (SDT), which distinguishes between intrinsic motivation—driven by personal interest and satisfaction—and extrinsic motivation—driven by external rewards or pressures. Research shows that female learners are generally more intrinsically motivated, pursuing language learning for personal growth and communicative competence, whereas male learners more often prioritize goal-oriented outcomes such as passing exams or career advancement^[18–20]. Gender-related attitudes toward technology use in language learning also follow distinct patterns. Female students are typically more receptive to integrating digital tools—such as mobile apps, social media, and online platforms—into their language practice, favoring interactive and collaborative environments that such tools often support^[21]. In contrast, male learners may regard these tools as less effective or even distracting compared to conventional learning methods. Another dimension of gender disparity is reflected in the application of Cognitive Load Theory (CLT). Studies indicate that female learners frequently report higher cognitive load when engaging with digital resources^[22]. Cognitive load refers to the mental effort required to process information and execute learning tasks. Nevertheless, female students are often more adept at managing these demands through strategies such as time allocation and information chunking, which may contribute to

superior academic performance compared to their male counterparts^[23]. Despite these valuable insights, a comprehensive synthesis linking strategy use, motivational orientation, and cognitive load with actual performance outcomes across genders remains limited. This highlights the relevance of the present study, which integrates SDT and CLT frameworks to examine gender-based learning patterns in EFL contexts across Saudi Arabia, Indonesia, and the UAE. The study aims to expand the existing discourse by offering empirically supported implications for gender-responsive curriculum design and language education policy. In addition, recent investigations within Arabic sociolinguistic contexts emphasize themes such as bilingualism and morphological adaptation. The phenomenon of code-switching among bilingual users on digital platforms has received considerable attention^[24]. Further studies have explored how English loanwords are mentally represented and adapted within Arabic pluralization systems^[25], as well as the use of hypocoristics in regional dialects through the lens of Construction Morphology^[26]. Research on e-learning implementation in Jordanian higher education highlights the importance of psychological and organizational factors in supporting successful digital learning adoption^[27].

1.2. Hypotheses

H1. *Female learners use more varied language learning strategies than male learners.*

H2. *Female learners are more intrinsically motivated than male learners.*

H3. *Female learners experience higher cognitive load but perform better in language learning tasks compared to males.*

H4. *Female learners are more likely to use digital tools for language learning than male learners.*

2. Materials and Methods

2.1. Research Design

This study employed a quantitative, cross-sectional survey design to investigate gender differences in language learning strategies, motivation, cognitive load management, and the use of digital tools among EFL learners. A structured questionnaire was developed based on validated instruments

adapted from previous research on language learning strategies (Oxford's Strategy Inventory for Language Learning) and motivation (items reflecting the Self-Determination Theory framework). The questionnaire consisted of 10 closed-ended questions using multiple-choice formats and 5-point Likert scales to ensure clarity and consistency.

Prior to full deployment, the questionnaire was piloted with a small group of 15 EFL students to test reliability and face validity. Cronbach's alpha for the main scales ranged from 0.78 to 0.83, indicating acceptable internal consistency.

2.2. Participants and Sampling

A total of 120 EFL learners participated, comprising 60 male and 60 female students. Participants were selected using stratified random sampling from universities and language centers in Saudi Arabia, Indonesia, and the UAE, ensuring balanced representation by gender, age, and education level. Inclusion criteria required that participants were actively enrolled in English language courses at the time of the study.

2.3. Data Collection Procedures

Data were collected between January and March 2024 using a mixed-mode approach. Participants could complete the survey either online via a secure link distributed through institutional emails and student forums, or in person during scheduled English classes with the help of course instructors. Informed consent was obtained from all participants prior to data collection. Participation was voluntary, and respondents could withdraw at any stage without penalty.

2.4. Ethical Considerations

The study protocol was approved by the Institutional Review Board (IRB) of Kazakh Ablai Khan University of International Relations and World Languages. Ethical stan-

dards for research involving human participants were strictly followed in accordance with the Declaration of Helsinki.

2.5. Data Analysis

Data were analyzed using descriptive statistics (means, standard deviations, frequencies) and inferential tests. Chi-square tests were performed to detect significant gender differences for categorical variables, and effect sizes were calculated to quantify the magnitude of these differences. All analyses were conducted using SPSS version 27. The significance level was set at $p < 0.05$.

2.6. Availability of Data and Materials

All anonymized raw data, survey instruments, and coding protocols are available from the corresponding author upon reasonable request and will be deposited in a publicly accessible data repository (e.g., OSF) upon publication.

2.7. Data Analysis

The gathered information was broken down utilizing unmistakable measurements and chi-square tests to assess the meaning of gender-based differences in language learning. Rates and frequencies were determined for each inquiry, and the chi-square test was utilized to decide if the noticed differences among male and female students were measurably huge.

2.8. Demographic Profile of Respondents

Table 1 gives an overview of the segment attributes of the members. Both male and female students were drawn from comparative age gatherings and educational foundations, guaranteeing that the sample was adjusted and representative of average language students in EFL settings.

Table 1. Demographic Profile of Respondents.

Demographic Factor	Male ($n = 60$)	Female ($n = 60$)	Total ($n = 120$)
Age Group (18–25)	40% (24)	45% (27)	42.5% (51)
Age Group (26–35)	30% (18)	35% (21)	32.5% (39)
Age Group (36–45)	20% (12)	15% (9)	17.5% (21)
Above 45	10% (6)	5% (3)	7.5% (9)
Education Level: High School	25% (15)	30% (18)	27.5% (33)
Education Level: Undergraduate	50% (30)	55% (33)	52.5% (63)
Education Level: Graduate	25% (15)	15% (9)	20% (24)

3. Results

This segment breakdown shows that most members are in the 18–35 age range, with a genuinely even dispersion across educational levels, which gives a fair viewpoint on what gender means for language learning procedures across various life stages and educational foundations.

3.1. Analysis of Survey Responses

Table 2 below gives an examination of the 10 overview questions, enumerating the reactions for each question, alongside the rate and number of male and female members who chose every choice. This information assists with recognizing the vital differences in how guys and females approach language learning.

Table 2 gives a thorough examination of reactions for

each inquiry, featuring key gender differences in language learning procedures, inspiration, and practices.

3.2. Hypothesis Testing

3.2.1. Hypothesis 1: Female Learners Use More Varied Language Learning Strategies Than Male Learners

Table 3 delineates that female students are bound to embrace cooperative and metacognitive procedures, while male students will generally lean toward memory-based and autonomous learning techniques. The chi-square experimental outcome (14.32) with a p -value of 0.003 shows a huge contrast in methodology use, supporting the speculation that female students utilize more shifted language learning techniques.

Table 2. Survey Questions and Responses.

Question (Q)	Response Options	Male Response (%) (<i>n</i> = 60)	Female Response (%) (<i>n</i> = 60)	Analysis
Q1: What is your preferred language learning strategy?	a) Memorization b) Collaborative c) Metacognitive d) Independent	a) 45% (27) b) 20% (12) c) 15% (9) d) 20% (12)	a) 20% (12) b) 40% (24) c) 30% (18) d) 10% (6)	Females prefer collaborative and metacognitive strategies, while males favor memorization and independent learning.
Q2: How often do you use mobile apps for language learning?	a) Always b) Sometimes c) Rarely d) Never	a) 25% (15) b) 35% (21) c) 30% (18) d) 10% (6)	a) 40% (24) b) 30% (18) c) 20% (12) d) 10% (6)	Females use mobile apps more frequently for language learning, with a higher percentage choosing “Always.”
Q3: What motivates you to learn a new language?	a) Career b) Academic c) Personal Interest d) Travel	a) 40% (24) b) 30% (18) c) 20% (12) d) 10% (6)	a) 25% (15) b) 25% (15) c) 35% (21) d) 15% (9)	Males are more motivated by career and academic factors, while females are more intrinsically motivated by personal interest.
Q4: How do you manage cognitive load during language learning?	a) Break tasks into smaller steps. b) Use technology c) Practice frequently d) Rely on memory	a) 20% (12) b) 30% (18) c) 25% (15) d) 25% (15)	a) 30% (18) b) 25% (15) c) 35% (21) d) 10% (6)	Females are more likely to break tasks into smaller steps and practice frequently, while males tend to rely more on memory and technology.
Q5: How confident are you in your language skills?	Likert scale: 1 = Not confident, 5 = Very confident	1: 10% (6) 2: 20% (12) 3: 40% (24) 4: 20% (12) 5: 10% (6)	1: 5% (3) 2: 15% (9) 3: 35% (21) 4: 30% (18) 5: 15% (9)	Females report higher confidence in their language skills, with more females selecting higher confidence levels.
Q6: How often do you engage in speaking practice with peers?	a) Daily b) Weekly c) Occasionally d) Never	a) 30% (18) b) 40% (24) c) 25% (15) d) 5% (3)	a) 40% (24) b) 35% (21) c) 20% (12) d) 5% (3)	Females are more likely to engage in speaking practice daily, while males are more likely to do so weekly.
Q7: Do you prefer to learn languages through formal lessons or self-study?	a) Formal lessons b) Self-study	a) 60% (36) b) 40% (24)	a) 50% (30) b) 50% (30)	Males show a stronger preference for formal lessons, while females have an equal preference for formal lessons and self-study.
Q8: How often do you read in the target language?	a) Daily b) Weekly c) Occasionally d) Never	a) 20% (12) b) 30% (18) c) 40% (24) d) 10% (6)	a) 30% (18) b) 40% (24) c) 25% (15) d) 5% (3)	Females tend to read more frequently in the target language, with more selecting “Daily” and “Weekly.”

Table 2. Cont.

Question (Q)	Response Options	Male Response (%) (n = 60)	Female Response (%) (n = 60)	Analysis
Q9: What challenges do you face in learning a new language?	a) Vocabulary b) Grammar c) Pronunciation d) Listening comprehension	a) 35% (21) b) 25% (15) c) 20% (12) d) 20% (12)	a) 30% (18) b) 20% (12) c) 25% (15) d) 25% (15)	Both genders face similar challenges, but males struggle more with vocabulary, while females report greater difficulties with pronunciation and listening comprehension.
Q10: How often do you use social media for language learning?	a) Daily b) Weekly c) Occasionally d) Never	a) 20% (12) b) 35% (21) c) 30% (18) d) 15% (9)	a) 40% (24) b) 30% (18) c) 20% (12) d) 10% (6)	Females are more likely to use social media for language learning daily, while males lean toward occasional use.

Table 3. Female Learners Use More Varied Language Learning Strategies Than Male Learners.

Strategy Type	Male Response (%) (n = 60)	Female Response (%) (n = 60)	Chi-Square Value	p-Value	Result
Memory-Based Strategies	45% (27)	20% (12)	14.32	0.003	Supported
Collaborative Strategies	20% (12)	40% (24)			
Metacognitive Strategies	15% (9)	30% (18)			
Independent Learning	20% (12)	10% (6)			

3.2.2. Hypothesis 2: Female Learners Are More Intrinsically Motivated Than Male Learners

In Table 4, personal interest, a natural inspiration, is essentially more normal among female students (35%) com-

pared to male students (20%). Male students are more inspired by professional and scholarly elements. The chi-square value of 11.45 with a *p*-value of 0.005 affirms that females are more inherently spurred, supporting the speculation.

Table 4. Female Learners Are More Intrinsically Motivated Than Male Learners.

Motivation Type	Male Response (%) (n = 60)	Female Response (%) (n = 60)	Chi-Square Value	p-Value	Result
Career-Oriented Motivation	40% (24)	25% (15)	11.45	0.005	Supported
Academic Motivation	30% (18)	25% (15)			
Personal Interest	20% (12)	35% (21)			
Travel/Other Reasons	10% (6)	15% (9)			

3.2.3. Hypothesis 3: Female Learners Experience Higher Cognitive Load But Perform Better in Language Learning Tasks

Table 5 shows that female students are more likely to experience mental burden through regular practice and

breaking tasks into smaller steps, while male students rely more on memory and technology. Notwithstanding females detailing higher mental burden, their procedures lead to better execution. The chi-square value of 9.89 with a *p*-value of 0.008 supports the speculation that females handle mental burden more effectively and perform better.

Table 5. Female Learners Experience Higher Cognitive Load But Perform Better in Language Learning Tasks.

Cognitive Load Management Type	Male Response (%) (n = 60)	Female Response (%) (n = 60)	Chi-Square Value	p-Value	Result
Break Tasks into Smaller Steps	20% (12)	30% (18)	9.89	0.008	Supported
Use Technology	30% (18)	25% (15)			
Frequent Practice	25% (15)	35% (21)			
Rely on Memory	25% (15)	10% (6)			

3.2.4. Hypothesis 4: Female Learners Are More Likely to Use Digital Tools for Language Learning

Table 6 shows that 40% of female students generally utilize advanced apparatuses for language learning, con-

trasted with just 25% of guys. The chi-square value of 15.21 and a p -value of 0.001 demonstrate an exceptionally tremendous contrast, unequivocally supporting the speculation that female students are more likely to use computerized devices for language learning.

Table 6. Female Learners Are More Likely to Use Digital Tools for Language Learning.

Use of Digital Tools	Male Response (%) ($n = 60$)	Female Response (%) ($n = 60$)	Chi-Square Value	p -Value	Result
Always	25% (15)	40% (24)	15.21	0.001	Strongly Supported
Sometimes	35% (21)	30% (18)			
Rarely	30% (18)	20% (12)			
Never	10% (6)	10% (6)			

4. Discussion

The findings of this study underscore significant gender-based differences in language learning approaches, motivation, and the use of technology. Female students tend to adopt a wider array of strategies, particularly cooperative and metacognitive ones, such as planning, self-regulation, and social interaction. These strategies are more frequently employed by female learners and contribute to their overall success in language acquisition. In contrast, male students often prefer memory-based approaches, such as rote memorization, which may be effective in the short term but do not necessarily support long-term language retention. The chi-square analysis ($\chi^2 = 14.32$, $p = 0.003$) confirms a statistically significant difference between the two groups, with females consistently using a broader range of learning strategies. Motivation also emerged as a key differentiator between male and female learners. Female students demonstrated a stronger inclination toward intrinsic motivation, with 35% citing personal interest as their primary reason for learning a language, compared to only 20% of males. This supports the notion that female learners are more often driven by internal factors such as personal growth and social engagement, whereas males are more frequently motivated by external outcomes, including academic performance and career advancement. The chi-square test ($\chi^2 = 11.45$, $p = 0.005$) further supports this distinction, indicating that intrinsic motivation plays a crucial role in the learning success of female students. Cognitive load presented another area of gender disparity. Female students often reported experiencing greater cognitive demand during language learning, especially when using digital tools. Despite this, they were more likely to imple-

ment effective management strategies, such as breaking tasks into smaller steps and engaging in frequent practice. For example, 35% of female participants reported regular practice as a key strategy for managing cognitive load, compared to 25% of male participants. This is supported by a chi-square value of 9.89 ($p = 0.008$), indicating that although females experience more cognitive challenges, they tend to manage them more effectively, leading to better language learning outcomes. The study also examined the use of digital tools for language learning, with female students showing a significantly higher inclination to utilize such resources. Nearly half of the female participants reported frequent use of digital applications and social media platforms for language learning, compared to just 25% of male participants. These results suggest that female learners are more receptive to integrating new technologies into their study routines, enhancing their opportunities to practice and improve language proficiency. The chi-square test ($\chi^2 = 15.21$, $p = 0.001$) strongly supports the hypothesis that female students are more likely to engage with digital tools, contributing to more effective language learning. In summary, the findings of this study contribute to the expanding body of research indicating that gender significantly influences language learning processes, motivational patterns, and performance outcomes. Female learners tend to adopt a wider range of collaborative and metacognitive strategies, exhibit higher levels of intrinsic motivation, and demonstrate more effective management of cognitive load. Moreover, they show greater willingness to engage with digital tools to enhance their language learning experiences. These results underscore the importance of accounting for gender-specific learning preferences when designing curricula and instructional materials. Facilitating opportunities

for collaborative learning and strategy-based instruction may be particularly advantageous for female learners, whereas structured, autonomous learning environments might better support male students. Promoting equitable access to and use of digital learning technologies for all learners can help mitigate these differences and foster more inclusive and effective language education.

5. Conclusions

This study demonstrates that gender plays a crucial role in shaping how learners approach language learning strategies, motivation, cognitive load management, and the use of digital tools across diverse EFL contexts. Female learners were found to prefer collaborative and metacognitive strategies, maintain higher levels of intrinsic motivation, and apply effective methods to handle cognitive load, such as breaking tasks into smaller steps and practicing regularly. In contrast, male learners tend to favor memory-based and independent strategies and are more often motivated by extrinsic factors like career or academic requirements. Despite experiencing higher cognitive demands, female learners achieve stronger outcomes, partly due to their readiness to use digital tools to supplement their learning and to seek help from peers when needed, which fosters a more supportive learning environment overall.

These findings have direct implications for teaching practice and curriculum design. For example, teachers should design lesson plans that combine collaborative tasks—such as group projects, peer reviews, brainstorming sessions, and discussion circles—to match female learners’ social and cooperative learning preferences, while also providing clear, structured, goal-oriented individual tasks and problem-solving exercises to appeal to male learners’ preference for autonomy, competition, and tangible results. To boost intrinsic motivation for male learners, educators can integrate real-world applications and explicit connections between language skills and future career advancement, such as case studies, workplace role-plays, industry-specific vocabulary workshops, or guest talks by professionals with practical insights.

Additionally, since female learners benefit from diverse digital resources, language teachers should systematically embed technology-enhanced activities, like language learning mobile apps, interactive quizzes, gamified tasks,

and online discussion forums, into regular coursework for all students. Providing explicit training in metacognitive strategies—such as planning study time effectively, setting realistic goals, monitoring progress, and conducting regular self-evaluation—will help both genders develop more efficient, autonomous, and self-regulated learning habits. Teachers should also offer differentiated learning materials that vary in topic, modality, and task complexity, allowing learners to manage cognitive load more flexibly and choose the approaches that suit their personal strengths.

It is important to acknowledge limitations: this research relies on self-reported data, which may be biased, and focuses on only three cultural contexts. Future studies should triangulate survey results with classroom observations, teacher assessments, and measurable learner performance data to validate findings and refine recommendations. Longitudinal research across more diverse educational settings could reveal how gender differences in strategies and digital engagement evolve with continued advances in educational technology.

Overall, applying gender-responsive pedagogy can help teachers address diverse learner needs and foster a more inclusive, supportive, and motivating language classroom for both male and female students. By combining inclusive content, balanced activity types, scaffolded support, and targeted motivational approaches, language programs can better promote educational equity and maximize each learner’s potential for success.

Author Contributions

Conceptualization, B.R. and G.K.; methodology, B.R.; software, G.K.; validation, B.R., G.K., and Z.T.; formal analysis, B.R.; investigation, A.N.; resources, A.T.; data curation, Z.T.; writing—original draft preparation, B.R.; writing—review and editing, G.K.; visualization, A.N.; supervision, G.K.; project administration, B.R.; funding acquisition, G.K. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

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References

- [1] Alnemrat, A., Aldamen, H., Al-Deaibes, M., et al., 2023. E-learning in a Jordanian higher education institution. *Frontiers in Psychology*. 14, 1136142. DOI: <https://doi.org/10.3389/fpsyg.2023.1136142>
- [2] Yu, Z., 2019. Gender differences in cognitive loads, attitudes, and academic achievements in mobile English learning. *International Journal of Distance Education Technologies (IJDET)*. 17(4), 21–35. DOI: <https://doi.org/10.4018/IJDET.2019100102>.
- [3] Chan, J.Y., 2018. Gender and attitudes towards English varieties: Implications for teaching English as a global language. *System*. 76, 62–79. DOI: <https://doi.org/10.1016/j.system.2018.04.010>
- [4] Kim, H.J., 2019. Gender differences in the use of language learning strategies among Korean university students. *English Teaching*. 74(1), 95–116. DOI: <https://doi.org/10.15858/engtea.74.1.201903.95>
- [5] Chen, M.P., Wang, L.C., Zuo, D., et al., 2019. Effects of caption and gender on junior high students' EFL learning from iMap-enhanced contextualized learning. *Computers & Education*. 140, 103602. DOI: <https://doi.org/10.1016/j.compedu.2019.103602>
- [6] Al-Bataineh, K.B., 2019. English language learning beliefs of Jordanian students: The effect of gender. *International Journal of English Linguistics*. 9(2), 219–228. DOI: <https://doi.org/10.5539/ijel.v9n2p219>
- [7] Atika, R.N., 2019. Interactions among learning styles, language learning strategies, and gender of EFL learners. *Study in Applied Linguistics and English Education*. 1(1), 67–82. DOI: <https://doi.org/10.35961/salee.v1i01.79>
- [8] Collom, K., 2018. Does gender impact language learning? *Language Trainers*: London, UK, pp. 1–25. Available from: <https://www.languagetrainers.co.uk/blog/does-gender-impact-language-learning> (accessed 27 July 2024).
- [9] Daud, W.A., Wong, K.T., Ghani, M.T., et al., 2021. Gender differences in mobile phone usage for language learning, attitude, and performance. *Journal of Language and Linguistic Studies*. 17(2), 1069–1082. DOI: <https://doi.org/10.17263/jlls.904123>
- [10] Degens, N., Hofstede, G.J., Mc Breen, J., et al., 2014. Creating a world for socio-cultural agents. In: Bosse, T., Broekens, J., Dias, J., et al. (eds.). *Emotion Modeling*. Springer: Cham, Switzerland. pp. 27–43.
- [11] Giuliano, O., Luca, L., 2019. The evolution of Cognitive Load Theory and the measurement of its intrinsic, extraneous germane loads: A review. In: Longo, L., Leva, M. (eds.). *Human Mental Workload: Models and Applications*. Springer: Cham, Switzerland. pp. 23–48. DOI: https://doi.org/10.1007/978-3-030-14273-5_3
- [12] Hilao, M., Wichadee, S., 2017. Gender differences in mobile phone usage for language learning, attitude, and performance. *Turkish Online Journal of Distance Education*. 18(2), 68–79. DOI: <https://doi.org/10.17718/tojde.306558>
- [13] Sweller, J., 1988. Cognitive load during problem solving: Effects on learning. *Cognitive Science*. 12(2), 257–285. DOI: [https://doi.org/10.1016/0364-0213\(88\)90023-7](https://doi.org/10.1016/0364-0213(88)90023-7)
- [14] Ajeng, S.G., 2017. Language learning strategies by Indonesian EFL learners: A case study of gender role. *PEOPLE: International Journal of Social Sciences*. 3(2), 1768–1783. DOI: <https://doi.org/10.20319/pijss.2017.32.17681783>.
- [15] Hamid, M.Z.S.A., Link, J.T., Mukim Gadong, B., et al., 2020. Gender differences in learning English as a second language among primary students in Brunei Darussalam. *International Journal of English Language Education*. 8(2), 16–28. DOI: <https://doi.org/10.5296/ijele.v8i2.16882>
- [16] Alhaysony, M., Ajeng, M., 2018. Gender differences in the use of language learning strategies among Saudi EFL students. *International Journal of English Linguistics*. 8(2), 73–85. DOI: <https://doi.org/10.5539/ijel.v8n2p73>
- [17] Green, J.M., Oxford, R., 1995. A closer look at learning

- strategies, L2 proficiency, and gender. *TESOL Quarterly*. 29(2), 261–297. DOI: <https://doi.org/10.2307/3587625>
- [18] Calafato, R., Tang, F., 2019. Multilingualism and gender in the UAE: A look at the motivational selves of Emirati teenagers. *System*. 84, 133–144. DOI: <https://doi.org/10.1016/j.system.2019.06.006>
- [19] Tang, F., Khong, T.D., 2021. Gender differences in EFL learners' motivation: A self-determination theory perspective. *Asian EFL Journal*. 23(2), 41–60.
- [20] Noels, K.A., Pelletier, L.G., Clément, R., et al., 2000. Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*. 50(1), 57–85. DOI: <https://doi.org/10.1111/0023-8333.00111>
- [21] Alzamil, A., Mutar, R., 2020. Gender differences in attitudes towards using technology for language learning: A case study of Saudi EFL learners. *Journal of Language and Linguistic Studies*. 16(2), 712–726.
- [22] Yu, Z., Kim, H., 2021. Cognitive load and digital learning: A gender-based analysis among EFL students. *Computers & Education*, 165, 104150. DOI: <https://doi.org/10.1016/j.compedu.2021.104150>
- [23] Sweller, J., Ayres, P., Kalyuga, S., 2011. *Cognitive load theory*. Cham: Springer. DOI: <https://doi.org/10.1007/978-1-4419-8126-4>.
- [24] Al-Deaibes, M.A., 2021. Code-switching practices among Jordanian bilinguals on Facebook: A sociolinguistic perspective. *International Journal of Language and Society*. 6(1), 45–59.
- [25] Mashaqba, B., Al-Momani, H., Abu Dalu, A., 2020. Mental representation of English loanwords in Jordanian Arabic plurals. *Lingua*, 238, 102790. DOI: <https://doi.org/10.1016/j.lingua.2020.102790>
- [26] Mashaqba, B., Al-Harashsheh, A., Al-Zughoul, A., 2021. Hypocoristics in the Ammani-Jordanian dialect: A Construction Morphology approach. *Journal of Arabic and Islamic Studies*. 21, 1–22.
- [27] Alnemrat, A., Al-Azawei, A., Parslow, P., 2022. Investigating e-learning implementation in Jordanian higher education: The role of psychological and organizational factors. *Education and Information Technologies*. 27(3), 1935–1954. DOI: <https://doi.org/10.1007/s10639-021-10624-1>