Investigating Listening Comprehension Challenges in Online EFL Courses: Perspectives from University Students

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Abstract

The current study investigated the challenges of listening comprehension encountered by Saudi university students in online English as a Foreign Language (EFL) classes. It examined the role played by gender and academic specialisations in the listening comprehension challenges in online EFL classes. Data were collected via an online questionnaire from five hundred and thirty-nine male and female undergraduates. The results indicated that the primary challenge was related to Listening Conditions, which ranked highest with a mean score of 3.78. This was followed by Language Exposure (mean score of 3.60), Suitability to Student Proficiency Level (mean score of 3.47), Well-being and Alertness (mean score of 3.41), and finally, Listening Skills (mean score of 3.40). Additionally, the results revealed statistically significant differences ($p < 0.05$) in the challenges of listening comprehension based on gender, with female students reporting greater difficulties than male students. Furthermore, significant differences ($p < 0.05$) were found concerning the students' specialisation, with those in health-related fields experiencing more pronounced challenges compared to their counterparts in scientific disciplines. This study emphasises the necessity of implementing strategies to enhance students' EFL listening comprehension and calls for more urgent and comprehensive research to address the identified challenges in listening comprehension.

Keywords: EFL, listening comprehension, listening challenges, online classes, higher education, Saudi Arabia

1. Introduction

Listening is fundamental to language acquisition and essential for spoken language proficiency. Hamouda (2013) highlights its crucial role in communication, noting that listening constitutes 40-50% of communication activities, surpassing speaking, reading, and writing. Despite its importance, listening often receives less emphasis compared to other language skills in ESL education, resulting in inadequate instructional strategies.

Listening involves not only the recognition of sounds and patterns, including phonemes and intonation (Rost, 2013) but also cognitive processes like decoding and synthesising information (Vandergrift & Goh, 2012). It requires integrating linguistic input with prior knowledge, context, and speaker intent, demanding active engagement and higher-order thinking skills (Goh, 2000). Thus, listening comprehension is both complex and critical for effective communication.

For ESL learners in non-native English-speaking countries, like Saudi Arabia, listening comprehension can be challenging. Many students focus more on hearing rather than comprehending (Osada, 2004). Limited exposure to spoken English, contextual differences, and varied proficiency levels further complicate listening comprehension, particularly in online environments. Online learning has introduced additional obstacles; Al-Jarf (2020) reports that Saudi ESL learners often struggle with poor internet connectivity and limited familiarity with digital platforms. Furthermore, the lack of non-verbal cues makes listening comprehension even more difficult (Al-Seghayer, 2014).

Saudi learners frequently experience anxiety and lack confidence in their listening abilities, compounded by traditional teacher-centred methods that hinder communicative language practice (Al-Nasser, 2015; Alrabai, 2016). In online classes, maintaining concentration during extended listening activities is particularly challenging (Hamouda, 2013). Moreover, research points to gender differences in listening comprehension, with females generally outperforming males due to higher linguistic sensitivity and lower anxiety (Boyle, 1987; Kimura, 2008; Namaziandost et al., 2018).

However, these differences vary based on cultural and individual factors, highlighting the need for more targeted research, especially among Saudi learners (Al-Khresheh & Alruwaili, 2024).

Academic specialisation also influences EFL listening comprehension. Students in humanities often demonstrate stronger listening skills due to exposure to complex discussions, while those in STEM fields excel with technical content but struggle with general listening tasks (Teng, 2017; Vafaee & Suzuki, 2020). Tailored listening instruction that considers discipline-specific demands can enhance listening skills more effectively (Goh, 2010; Lynch, 2011).

Given these challenges, this study aims to explore the challenges of listening comprehension faced by Saudi EFL learners in online university settings, focusing on gender and academic specialisation differences. By addressing the listening challenges highlighted earlier (Al-Seghayer, 2014; Al-Jarf, 2020), this research provides insights for developing targeted instructional strategies. It also emphasises the importance of interactive multimedia tools (Hampel & Stickler, 2012; Yeldham, 2016) and metacognitive strategies (Vandergrift & Goh, 2012) to improve listening skills. The findings of the current study are expected to support educational reform in Saudi Arabia (Alrabai, 2016; Al-Nasser, 2015) and contribute to global ESL education by addressing universal challenges in online listening comprehension and enriching the discourse on effective language teaching practices.

2. Literature Review

This literature review explores the pivotal role of listening skills in language acquisition, delving into the complexities of listening comprehension and the specific challenges faced by EFL learners. It examines the historical recognition and research focus on listening, the cognitive and metacognitive processes involved, and the linguistic and contextual factors affecting comprehension. Additionally, it addresses the differences in listening challenges based on gender and academic specialisation, highlighting effective strategies for improving listening skills. Through a critical analysis, this review aims to establish an understanding of the nature of listening comprehension and its implications for language learning in general and the EFL Saudi context in specific.

2.1 Listening Comprehension

Listening skills have long been recognised as a fundamental component of language acquisition and communication. Rankin (1926) acknowledged the importance of listening as the primary mode of human communication but focused attention on listening within second and foreign language research only emerged in the mid-20th century. Researchers like Steven (1987), Floyd (1985), and Feyten (1991) have underscored the critical role of listening in language learning, emphasising that active listening is essential for effective communication. Floyd (1985) argued that understanding the purpose and context of listening is crucial, while Krashen (1982) highlighted the reliance of language acquisition on comprehensible input, supported by Rost (1994) and Hunsaker (1990).

The frequency with which listening occurs in the learning process underscores its significance in language development. Gilakjani and Ahmadi (2011) stressed that listening is crucial for language comprehension, particularly for EFL learners, as it constitutes a key component of successful learning. Despite its importance, listening comprehension is often identified as the most challenging skill in EFL classrooms (Steven, 1987; Floyd, 1985; Feyten, 1991). This challenge necessitates a deeper understanding of the processes involved in listening and the strategies that can be employed to improve this essential skill.

Listening comprehension involves a complex, multifaceted process of making sense of auditory input. Vandergrift and Goh (2012) identified metacognitive strategies such as planning, monitoring, and evaluating as essential for active engagement with spoken material. These strategies enable listeners to connect new information with existing knowledge and experiences, transforming listening from a passive to an active process and enhancing overall comprehension effectiveness.

Listening can be classified into five types: discriminative, comprehensive, critical, therapeutic, and appreciative listening (Wolvin & Coakley, 1988). Each type requires different cognitive and metacognitive strategies, demonstrating the complexity of the listening process. Chastain (1971) proposed four stages of listening comprehension: lingual pattern recognition, message reception, message processing, and contextual comprehension. Ahmadi (2016) argued that listening comprehension begins with an auditory memory process leading to discourse-level understanding, underscoring the complexity of listening comprehension and the need for various strategies and processes to accurately interpret spoken language.

Buck (2001) highlighted the interactive nature of listening, where listeners utilise both bottom-up and top-down processes to decode and understand spoken language. Bottom-up processing involves decoding sounds, words, and sentences, while top-down processing uses background knowledge and context to interpret meaning. This interaction

between different levels of processing is essential for effective listening comprehension, making it a crucial area of focus for improving EFL learning outcomes.

2.2 Listening Comprehension in an EFL Setting

Listening comprehension is particularly crucial in EFL contexts, where instruction is often delivered in the target language. Without understanding input, language learning cannot occur (Rost, 1994). Effective listening comprehension in an EFL setting enhances pragmatic language use and overall communicative competence (Field, 2008). Goh and Taib (2006) emphasised that listening comprehension reflects real-world communicative competence, fostering confidence and proficiency.

Effective listening comprehension allows learners to monitor their understanding, identify difficulties, and employ compensatory strategies (Graham & Macaro, 2008). It also cultivates concentration, resilience, and confidence in language learning (Vandergrift, 2007). The significance of listening comprehension can be summarised through several key points: it serves as the foundation for language acquisition (Vandergrift & Goh, 2012), is essential for communication skills development (Brown & Yule, 1983; Vandergrift, 2007), enhances cognitive abilities (Rubin, 1994; Rost, 2011), correlates with academic achievement (Vandergrift, 2004; Richards & Schmidt, 2013), and plays a vital role in language proficiency assessment (Wagner, 2008).

International research underscores the importance of listening comprehension in diverse EFL settings. For instance, Cross (2009) demonstrated that listening strategy instruction significantly improves comprehension of news video texts among EFL learners. Similarly, Milliner and Dimoski (2019) found that explicit listening strategy training enhances listening skills in Japanese EFL learners. Research by Al-Shammari (2020) also highlighted the positive impact of strategy instruction on Iraqi EFL learners' listening comprehension and metacognitive strategy use.

Furthermore, Renandya and Hu (2018) emphasised the growing recognition of listening in L2 learning and the focus on metacognitive strategies. Lynch and Mendelsohn (2020) noted that listening remains a significant challenge for EFL learners, necessitating effective strategy use to improve listening skills. This view is supported by Goh and Vandergrift (2022), who advocate for metacognitive instruction to enhance listening comprehension in EFL contexts.

Listening comprehension is foundational for language acquisition, preceding the development of speaking, reading, and writing skills (Vandergrift & Goh, 2012). Field (2008) supports this by arguing that listening provides learners with essential language input, which facilitates vocabulary acquisition, grammar understanding, and pronunciation improvement. Effective communication necessitates both speaking and active listening, as noted by Brown and Yule (1983). Vandergrift (2007) concurs, highlighting that proficient listening skills are crucial for successful communication in real-life situations.

Additionally, listening comprehension enhances cognitive abilities such as attention, memory, and inferencing skills (Rubin, 1994). These cognitive benefits significantly contribute to overall language proficiency and academic success, with Rost (2011) further emphasising the involvement of both bottom-up and top-down cognitive processes in listening comprehension. The correlation between listening comprehension proficiency and academic achievement is well-documented. Vandergrift (2004) discovered that students with strong listening skills performed better in academic tasks requiring language comprehension and expression. This finding is echoed by Richards and Schmidt (2013), who identified effective listening comprehension as essential for understanding lectures, participating in class discussions, and comprehending course materials, particularly in academic settings.

Furthermore, Wagner (2008) highlights the role of listening comprehension in assessing language proficiency, noting its importance in standardised tests such as the TOEFL, IELTS, and Cambridge exams. Vandergrift and Goh (2012) underscore the necessity of developing strategies to improve listening comprehension, particularly for EFL students. According to Oxford and Crookall (1990), successful listening experiences can enhance EFL students' motivation and engagement in language learning, such as understanding challenging audio passages.

Gender differences in listening comprehension have garnered significant attention in EFL education. Research consistently indicates that females often outperform males in listening comprehension tasks due to cognitive, affective, and social factors. A study by Boyle (1987) demonstrated that females generally exhibit superior listening comprehension skills compared to males, attributing this advantage to higher levels of linguistic sensitivity and social orientation. These skills enable females to better interpret verbal and nonverbal cues during listening activities. Namaziandost, Sabzevari, and Hashemifardnia (2018) support this finding, who observed that females employ more effective listening strategies, contributing to their enhanced performance in listening tasks. Cognitively, Kansaku, Yamaura, and Kitazawa (2000) found gender differences in brain lateralization, with females showing greater bilateral activation during language tasks, potentially enhancing their auditory processing abilities. Complementing this,

Kimura (2008) noted that females experience lower levels of listening anxiety compared to males, allowing them to focus better and perform more effectively in listening exercises.

It is crucial to acknowledge that gender differences in listening comprehension are not uniform across all contexts and can vary based on cultural, educational, and individual factors. For instance, Al-Khresheh and Alruwaili (2020) found distinct gender-based differences in listening comprehension strategies among Saudi EFL learners, highlighting the need for further research to fully understand these dynamics. Given the potential impact of gender on listening comprehension, this study aims to explore the specific challenges faced by Saudi EFL university students in their online classes. By examining these challenges across gender and academic specialisation, the research seeks to develop effective interventions that address the unique needs of male and female learners, ultimately enhancing their listening comprehension proficiency in a digital learning environment.

Academic specialisation plays a significant role in EFL listening comprehension, influencing how learners process and understand spoken language within their fields of study. Different academic disciplines often demand varied linguistic and cognitive skills, impacting listening comprehension proficiency. Research by Teng (2017) highlights that learners from disciplines with a strong emphasis on languages, such as humanities and social sciences, typically exhibit better listening comprehension skills compared to those in STEM fields. This discrepancy is largely due to the frequent exposure to complex texts and discussions in language-rich environments, which enhance listening skills and vocabulary knowledge. In addition, Lynch (2011) found that the listening strategies employed by learners vary significantly across disciplines. For instance, students in business studies often develop effective note-taking and summarising skills to manage the high volume of auditory information they encounter. In contrast, students in creative arts might focus more on interpretative listening and understanding nuanced expressions.

Furthermore, studies have shown that the vocabulary breadth and depth required in different specialisations can affect listening comprehension. Vafaee and Suzuki (2020) argue that students in fields requiring extensive technical vocabularies, such as engineering or medicine, might struggle more with general EFL listening tasks. However, they often excel in listening comprehension within their specific jargon and context. These findings suggest that tailored listening instruction that considers the specific linguistic demands of different academic specialisations can be more effective. Goh (2010) recommends incorporating discipline-specific listening materials and tasks to help learners develop relevant skills. This approach not only improves general EFL listening comprehension but also enhances learners' ability to handle academic content in their fields.

These dynamics are crucial for Saudi EFL learners. The unique challenges faced by Saudi university students in online EFL classes may vary significantly based on their academic specialisation. Understanding these differences is essential for developing targeted strategies that address their specific needs, thereby improving overall listening comprehension proficiency. The current study aims to explore the role of gender differences and academic specialisations in listening comprehension and provide insights into effective interventions tailored to different academic disciplines.

2.3 Listening Comprehension Challenges

Listening comprehension remains a significant challenge for EFL students due to various linguistic, cognitive, psychological, and contextual factors. Linguistic factors such as limited vocabulary and grammar knowledge impede students' ability to grasp spoken language nuances (Asriati, 2017). Goh (2000) emphasised that comprehension involves decoding language and understanding its meaning in context, with lower proficiency levels hindering effective processing and interpretation.

Prior knowledge and topic familiarity are crucial for successful listening comprehension. Osada (2004) highlighted the reliance on existing knowledge to make sense of new information, with a lack of background knowledge leading to comprehension breakdowns. This is supported by Newton and Nation (2020), who argued that building background knowledge significantly enhances comprehension. Phonological differences between languages further exacerbate listening challenges (Takeno & Takatsuka, 2007). The rapid pace of spoken language presents another obstacle, with native speakers often speaking quickly and using colloquial expressions (Hassan, 2000).

Psychological factors, particularly anxiety, significantly impact listening comprehension. Asriati (2017) noted that nervousness or fear of mistakes can distract learners, impeding their concentration. Goh (2000) supported this by highlighting cognitive load theory, which suggests that anxiety taxes cognitive resources needed for processing language. Similarly, MacIntyre and Gregersen (2012) found that anxiety negatively affects listening performance, suggesting the need for anxiety-reducing strategies in teaching.

Situational factors, including classroom dynamics and teaching methodologies, also influence listening comprehension. Osada (2004) argued that passive listening without interactive engagement fails to scaffold learners' skills adequately.

Effective pedagogical approaches are essential to enhancing listening abilities. In addition, learners' motivation and attitudes towards listening tasks play a crucial role. Positive attitudes and high motivation levels are associated with better listening performance (Oxford & Crookall, 1990). Vandergrift and Tafaghodtari (2010) also found that motivated learners tend to employ more effective listening strategies, leading to better outcomes.

Research in the Saudi context highlights these global challenges. Hamouda (2013) identified major listening comprehension difficulties among Saudi students, including speech speed, different accents, insufficient vocabulary, pronunciation issues, anxiety, and lack of concentration. Almilad (2017) and Alzamil (2021) found similar challenges among Saudi postgraduate and female university students, respectively. These findings underscore the need for tailored strategies to address specific learner needs.

These challenges are not unique to one region. Chen et al. (2020) found that Chinese learners of English also struggle with fast speech and unfamiliar accents, which hinder comprehension. Mahmoud and Ahmed (2020) studied Sudanese students, finding difficulties with informal words, idiomatic expressions, and complex grammatical structures. Nowrouzi et al. (2015) classified these difficulties into perception, parsing, and utilisation phases, highlighting issues such as distraction, misperception of sounds, and uncertainty regarding key ideas. Addressing these factors holistically can better support language learners in developing robust listening comprehension skills essential for language acquisition and communication proficiency.

This body of research necessitates filling the gap in the literature by examining the EFL listening comprehension challenges in a Saudi context and exploring the role of gender and academic specialisations in shaping these challenges. Consequently, some implications and recommendations will provided to facilitate the learning and teaching of EFL listening comprehension more effectively in an EFL context.

2.4 Research Questions

1. What specific listening comprehension challenges are faced by male and female university students in online English as a Foreign Language (EFL) classes?

2. How do the listening comprehension challenges of university students differ across gender and academic specialisation in online EFL classes?

3. Methodology

The nature of the current study's research questions influenced the decision to employ an exploratory methodology. This rationale can be supported by Creswell's (2009:212) assertion that using an exploratory methodology "is useful for a researcher who wants to explore a phenomenon." This methodology enables the researchers to identify the current challenges that EFL students face in listening comprehension within EFL online classes.

3.1 Sampling

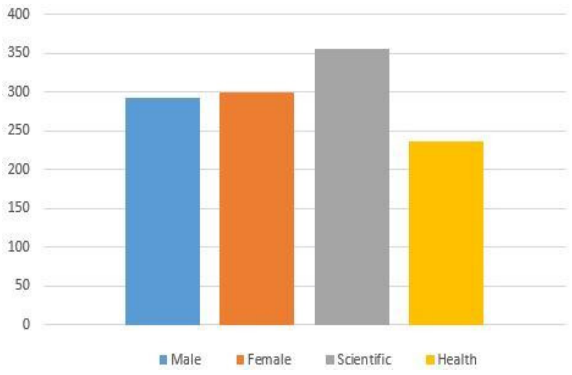

Figure 1. Frequencies and Percentages of Sample by Gender and Specialization Variables

To ensure the validity and reliability of the study instrument, the exploratory pilot sample consisted of 20 students from outside the study sample. The current study used a non-probability or convenience sampling strategy for both male and female students, which means the sample was chosen based on their accessibility and availability at the time of the research (Cohen et al., 2011). Furthermore, this type of strategy supplies the researcher with thick and rich data to deliver the understanding that is the focus of interest (Creswell, 2009). However, there are many

limitations associated with this strategy, especially the possibility of selection bias that restricts the generalizability of finding abroad EFL students' population (Neuman, 2014). However, the chosen sample—male and female undergraduate EFL students at Taibah University with a shared socio-cultural background and age range (19–22 years)— provides a clearer analysis of their challenges in listening comprehension. Such a sample can give rich and detailed data that can inform additional research. The study population consisted of 593 male and female first-year students in scientific and health colleges. The researchers created an electronic link and disseminated it to the target group. After setting a response period of three months, the number of respondents reached 593 female and male students. Figure 1 shows the distribution of the study sample according to gender and specialisation variables.

3.2 Data Collection

The researchers used a questionnaire as a data collection tool in the current study because "it enables a wider and much larger population to be accessed "(Cohen et al., 2011, p.280). The data were collected from male and female first-year students in scientific and health colleges. The questionnaires were sent to the students online through SurveyMonkey after they had given their consent to participate in the study. The questionnaire consists of 26 items distributed over five domains according to a five-point Likert scale (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) with values assigned sequentially (5, 4, 3, 2, 1). In the current study, the structure of the questionnaire was adapted from other relevant studies (Almjlad,2017. Alzamil,2021; Mirza et al, 2021). However, the questionnaire items were developed, reworded, and modified.

Questionnaire Validity: The validity of the study instrument (questionnaire) was verified through two types of validity:

- **Face Validity:** Five experienced and specialised specialists reviewed the questionnaire. Their feedback and suggestions were incorporated, including the addition of new items, deletion or modification of inappropriate items, placement of items in their respective domains, and clarity and language correctness.
- **Consistency Validity:** The study instrument was applied to an exploratory sample of 20 students outside the study sample. The Pearson correlation coefficient between the items of the challenges in listening comprehension domains and the total score for each domain and between the items and the total challenges score was calculated as shown in Table 1.

Table 1. Pearson Correlation Coefficients between Listening Comprehension Challenge Items and Total Scores

No.	Domain - Items	Correlation with Domain	Correlation with Instrument
1	Suitability to Student Proficiency Level	.828**	
	Speech Rate: "The speech rate in listening excerpts is appropriately challenging for my proficiency level."	.521*	.675**
	Dialect Variety: "I find it difficult to understand excerpts with various dialects."	.762**	.511*
	Multiple Speakers: "Listening to excerpts with multiple speakers negatively affects my comprehension."	.775**	.559*
	Pronunciation: "I find it difficult to understand excerpts with unfamiliar pronunciation."	.854**	.671**
2	Language Exposure	.966**	
	Vocabulary Range: "I frequently encounter new vocabulary that I find difficult to understand."	.701**	.745**
	Colloquial Language: "Understanding colloquial language in excerpts is challenging for me."	.667**	.678**
	Topic Familiarity: "I find it difficult to understand excerpts on topics I am not familiar with."	.514*	.560*
	Sentence Complexity: "Complex sentence structures in listening excerpts hinder my comprehension."	.795**	.775**
	Polysemous Words: "Words with multiple meanings often confuse me when listening to excerpts."	.736**	.769**

	Lexical Focus: "Understanding each word instead of the overall meaning is challenging for me."	.826**	.720**
	Topic Adaptability: "I find it difficult to understand the listening text when the topic is unfamiliar."	.629**	.569**
3	Well-being and Alertness	.945**	
	Focus Levels: "It is difficult to maintain focus throughout the listening activity."	.783**	.666**
	Memory: "I often experience memory lapses that affect my comprehension."	.536*	.533*
	Anxiety Management: "Anxiety negatively affects my ability to understand listening excerpts."	.837**	.775**
	Fatigue Impact: "Feeling tired makes it difficult for me to concentrate on listening to excerpts."	.788**	.769**
	Time Management Skills: "I do not manage my time effectively during listening activities."	.669**	.652**
	Sense of Isolation: "I often feel isolated during online listening activities, affecting my engagement."	.706**	.708**
4	Listening Skills	.924**	
	Transitional Cues: "I find it difficult to identify transitional cues in listening excerpts."	.711**	.743**
	Predictive Listening: "It is difficult to predict what might be said next in listening excerpts."	.766**	.671**
	Stress and Intonation: "I do not pay attention to stress and intonation to understand implied meanings."	.662**	.595**
	Interpretation Skills: "I find it difficult to interpret meanings beyond the literal spoken words."	.634**	.781**
	Note-taking: "I am unable to take notes or express my opinion after listening."	.660**	.594**
5	Listening Conditions	.898**	
	Environmental Distractions: "Background noise significantly hinders my ability to concentrate."	.857**	.780**
	Material Quality: "Poor audio quality of materials negatively affects my comprehension."	.766**	.703**
	Media Constraints: "Constraints imposed by the media used for listening (e.g., video or audio quality) negatively affect my comprehension."	.802**	.762**
	Technical Equipment: "Inadequate equipment (e.g., headphones or speakers) negatively affects the clarity of listening excerpts."	.827**	.678**

Significant at (0.01), * Significant at (0.05).

Table 1 shows that Pearson correlation coefficients between the items of the challenges in listening comprehension domains and the total score for each domain are statistically significant at the 0.01 level. Pearson correlation coefficients between the items and the total challenges score range from (0.514* - 0.856**), and all are significant at (0.01) and (0.05). Similarly, Pearson correlation coefficients between the domains and the total challenges score are statistically significant at the 0.01 level, ranging from (0.828** - 0.966**), indicating the validity of the study instrument.

Questionnaire Reliability: Reliability coefficients for the domains of listening comprehension challenges and the total challenges score were calculated using Cronbach's alpha equation. The study instrument was applied to a pilot sample of 20 students. Table 2 shows the reliability coefficients.

Table 2. Cronbach's Alpha Reliability Coefficients for the Domains of Listening Comprehension Challenges and the Total Score

No.	Domain	Reliability Coefficient
1	Suitability to Student Proficiency Level	0.71
2	Language Exposure	0.82
3	Well-being and Alertness	0.81
4	Listening Skills	0.72
5	Listening Conditions	0.83
	Overall Instrument Reliability	0.95

Table 2 shows that the overall Cronbach's alpha reliability coefficient for the total challenges score is 0.95, with reliability coefficients for the domains ranging between 0.71 and 0.83, indicating the high reliability of the study instrument.

3.3 Research Procedures

The researchers utilised a convenience sample strategy, inviting male and female EFL students to participate through an online questionnaire. Three months after the questionnaire had been distributed, 593 female and male students responded to the questionnaire. The procedures used in the current study: First, the participants were asked to sign a consent form, which ensured voluntariness, confidentiality, anonymity, and the right to withdraw (BERA, 2018). Second, participants were requested to fill in an online questionnaire, which was then quantitatively analysed. Third, after three months of distributing the question, 593 female and male students participated.

3.4 Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 23 was used to analyse the study results and answer its questions. The following methods were used:

- Pearson correlation coefficient to verify consistency validity.
- Cronbach's alpha to verify the reliability of the study instrument.
- Means, standard deviations, and ranks to answer the first question about the challenges faced by male and female university students in listening comprehension within online English as a Foreign Language (EFL) classes.
- The following scale was used to determine the degree of agreement based on the range equation in Table 3.

Table 3. Criteria for Interpreting Means According to the Five-Point Likert Scale

Degree of Agreement	Very Low	Low	Medium	High	Very High
Mean	1.00-1.80	>1.80-2.60	>2.60-3.40	>3.40-4.20	>4.20-5.00

An independent samples t-test was used to answer questions (2) and (3).

3.5 Ethical Considerations

Before taking part in the current study, the researchers took all the necessary steps to preserve the participants' psychological, physical, and emotional well-being. As a result, the participants were given a consent form to sign, and the research began to ensure that their participation was voluntary (BERA, 2018). Furthermore, the researchers notified the participants that confidentiality would be preserved and reminded them that they had the right to withdraw from the study at any time, as well as to remove any information or data to which they had contributed. Pseudonyms were used to keep individuals anonymous during the study.

4. Research Results

This section presents the results addressing the specific listening comprehension challenges faced by male and female university students in online EFL classes (RQ1) and how these challenges differ across gender and academic specialisation (RQ2). The analysis highlights the key issues encountered by students, providing insights into the

varying challenges experienced by both groups. By examining these challenges in detail, the results aim to offer a comprehensive understanding of the factors impacting listening comprehension in online EFL settings, thereby informing targeted strategies to improve educational outcomes.

4.1 Challenges in Listening Comprehension in Online EFL Classes

RQ1: What specific listening comprehension challenges are faced by male and female university students in online English as a Foreign Language (EFL) classes?

The researchers calculated the means, standard deviations, and ranks for the responses of the study sample members to the challenges faced by university students (both male and female) in listening comprehension within online English as a Foreign Language (EFL) classes, as shown in Figure 2 and Table 4 below.

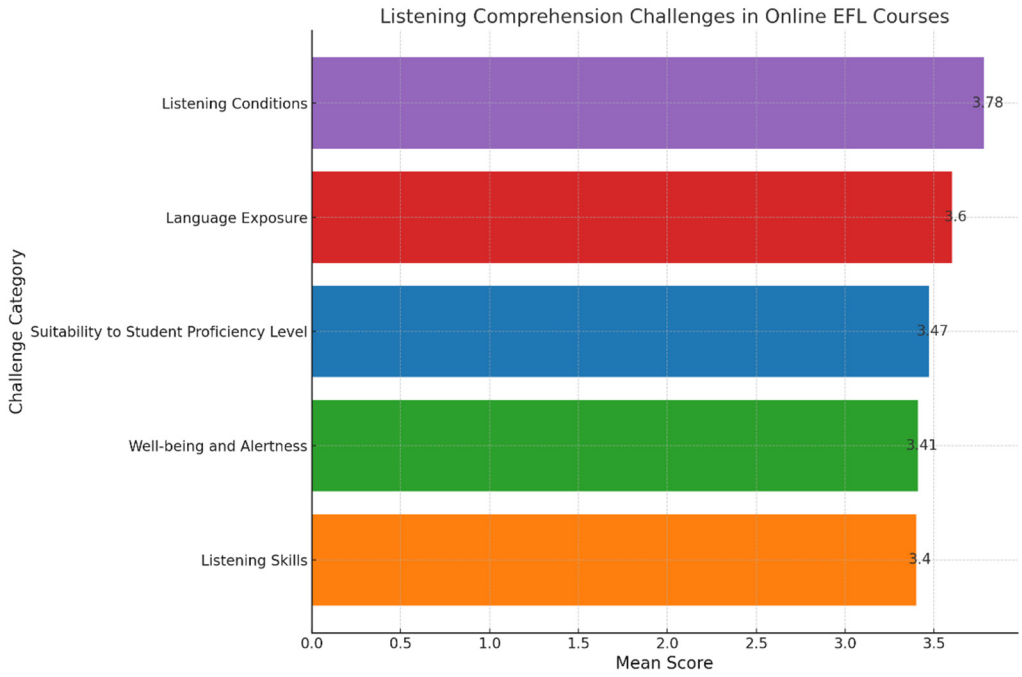

Figure 2. Listening Comprehension Challenges in Online EFL Courses.

Table 4. Statistical Analysis of the Challenges Faced by University Students in Online EFL Listening Comprehension Classes

No.	Rank	Domain - Items	Mean	Standard Deviation	Degree
1	3	Suitability to Student Proficiency Level	3.47	.767	High
	2	Speech Rate: The speech rate in listening excerpts is appropriately challenging for my proficiency level.	3.48	1.097	High
	3	Dialect Variety: I find it difficult to understand excerpts with various dialects.	3.43	1.175	High
	4	Multiple Speakers: Listening to excerpts with multiple speakers negatively affects my comprehension.	3.04	1.262	Medium
	1	Pronunciation: I find it difficult to understand excerpts with unfamiliar pronunciation.	3.92	.946	High
2	2	Language Exposure	3.60	.858	High
	2	Vocabulary Range: I frequently encounter new vocabulary that I find difficult to understand.	3.68	1.003	High
	6	Colloquial Language: Understanding colloquial language in excerpts is challenging for me.	3.54	1.239	High

	3	Topic Familiarity: I find it difficult to understand excerpts on topics I am not familiar with.	3.66	1.105	High
	4	Sentence Complexity: Complex sentence structures in listening excerpts hinder my comprehension.	3.60	1.074	High
	1	Polysemous Words: Words with multiple meanings often confuse me when listening to excerpts.	3.70	1.195	High
	7	Lexical Focus: Understanding each word instead of the overall meaning is challenging for me.	3.43	1.166	High
	5	Topic Adaptability: I find it difficult to understand the listening text when the topic is unfamiliar.	3.60	1.139	High
4	4	Well-being and Alertness	3.41	.844	High
	3	Focus Levels: It is difficult to maintain focus throughout the listening activity.	3.62	1.151	High
	4	Memory: I often experience memory lapses that affect my comprehension.	3.36	1.277	Medium
	2	Anxiety Management: Anxiety negatively affects my ability to understand listening excerpts.	3.66	1.181	High
	1	Fatigue Impact: Feeling tired makes it difficult for me to concentrate on listening to excerpts.	3.80	1.132	High
	6	Time Management Skills: I do not manage my time effectively during listening activities.	2.82	1.191	Medium
	5	Sense of Isolation: I often feel isolated during online listening activities, affecting my engagement.	3.18	1.240	Medium
5	5	Listening Skills	3.40	.860	Medium
	4	Transitional Cues: I find it difficult to identify transitional cues in listening excerpts.	3.25	1.114	Medium
	3	Predictive Listening: It is difficult to predict what might be said next in listening excerpts.	3.31	1.118	Medium
	5	Stress and Intonation: I do not pay attention to stress and intonation to understand implied meanings.	2.99	1.256	Medium
	2	Interpretation Skills: I find it difficult to interpret meanings beyond the literal spoken words.	3.32	1.110	Medium
	1	Note-taking: I am unable to take notes or express my opinion after listening.	4.10	1.010	High
1	1	Listening Conditions	3.78	.736	High
	2	Environmental Distractions: Background noise significantly hinders my ability to concentrate.	4.30	.920	High
	1	Material Quality: Poor audio quality of materials negatively affects my comprehension.	4.37	.968	High
	4	Media Constraints: Constraints imposed by the media used for listening (e.g., video or audio quality) negatively affect my comprehension.	3.19	1.236	Medium
	3	Technical Equipment: Inadequate equipment (e.g., headphones or speakers) negatively affects the clarity of listening excerpts.	3.27	1.113	Medium

Overall Challenges Score: 3.52, Standard Deviation: 0.703, Degree: High

Table 4 shows that the overall challenges score faced by male and female university students in listening comprehension within online English as a Foreign Language (EFL) classes are high, with a mean score of 3.52 and a standard deviation of 0.703. The Listening Conditions domain ranked first with a mean score of 3.78 and a standard deviation of 0.736, indicating a high degree. The means for the challenges in the Listening Conditions domain ranged between 3.27 and 4.30, with the most significant challenge being Environmental Distractions: "Background noise significantly hinders my ability to concentrate," and the least significant being Technical Equipment: "Inadequate equipment (e.g., headphones or speakers) negatively affects the clarity of listening excerpts."

The Language Exposure domain ranked second with a mean score of 3.60 and a standard deviation of 0.858, indicating a high degree. The means for the challenges in the Language Exposure domain ranged between 3.43 and 3.70, with the most significant challenge being Polysemous Words: "Words with multiple meanings often confuse me when listening to excerpts," and the least significant being Lexical Focus: "Understanding each word instead of the overall meaning is challenging for me."

The Suitability to Student Proficiency Level domain ranked third with a mean score of 3.47 and a standard deviation of 0.767, indicating a high degree. The means for the challenges in the Suitability to Student Proficiency Level domain ranged between 3.04 and 3.92, with the most significant challenge being Pronunciation: "I find it difficult to understand excerpts with unfamiliar pronunciation," and the least significant being Multiple Speakers: "Listening to excerpts with multiple speakers negatively affects my comprehension."

The Well-being and Alertness domain ranked fourth with a mean score of 3.41 and a standard deviation of 0.844, indicating a high degree. The means for the challenges in the Well-being and Alertness domain ranged between 2.82 and 3.80, with the most significant challenge being Fatigue Impact: "Feeling tired makes it difficult for me to concentrate on listening excerpts," and the least significant being Time Management Skills: "I do not manage my time effectively during listening activities."

The Listening Skills domain ranked last with a mean score of 3.40 and a standard deviation of 0.860, indicating a medium degree. The means for the challenges in the Listening Skills domain ranged between 2.99 and 4.10, with the most significant challenge being Note-taking: "I am unable to take notes or express my opinion after listening" and the least significant being Stress and Intonation: "I do not pay attention to stress and intonation to understand implied meanings."

4.2 Differences in Listening Comprehension Challenges in Online EFL Classes

4.2.1 Gender Differences in Listening Comprehension Challenges

RQ2. How do the listening comprehension challenges of university students differ across gender and academic specialisation in online EFL classes?

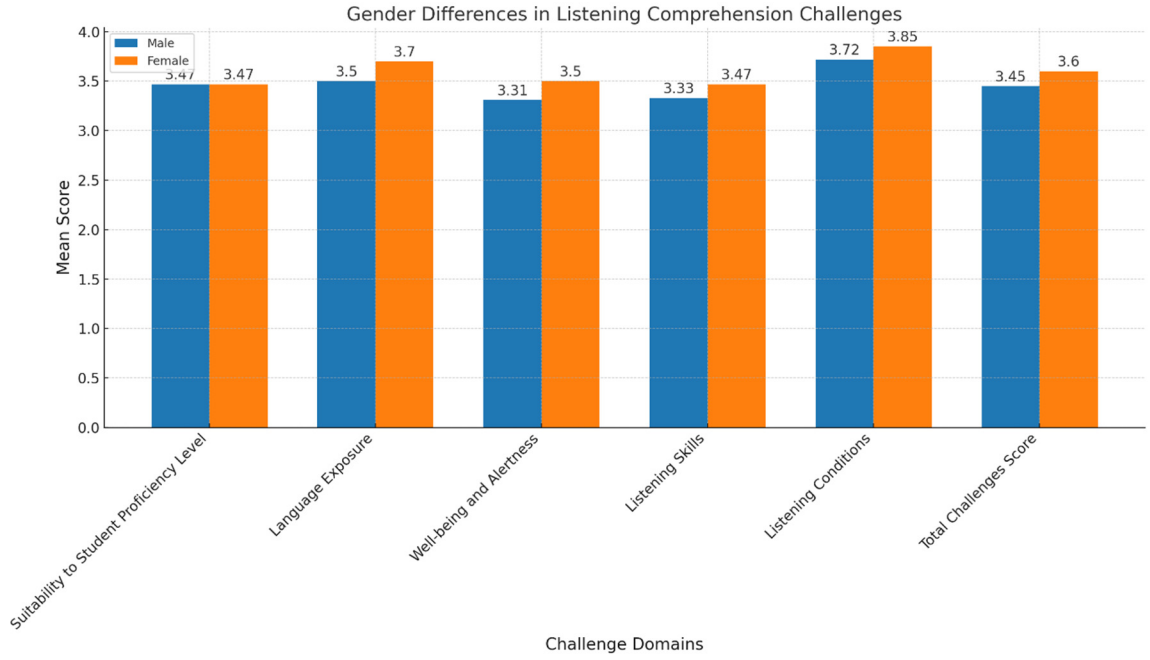

Figure 3. Gender Differences in EFL Listening Comprehension Challenges

The researchers used an independent samples t-test to determine the significance of differences between the means of responses of the study sample to the challenges faced by male and female university students in listening comprehension within online English as a Foreign Language (EFL) classes based on the gender variable, as shown in Figure 3 and Table 5.

Table 5. Independent Samples T-test for Gender Differences in Responses to Challenges Faced by University Students in Online EFL Listening Comprehension Classes

Domain	Gender	N	Mean	Std. Deviation	t	df	P-value
Suitability to Student Proficiency Level	Male	293	3.47	.749	-.039	591	.969
	Female	300	3.47	.786			
Language Exposure	Male	293	3.50	.849	-2.944	591	.003
Well-being and Alertness	Female	300	3.70	.855			
	Male	293	3.31	.816	-2.722	591	.007
Listening Skills	Female	300	3.50	.862			
	Male	293	3.33	.834	-1.963	591	.050
	Female	300	3.47	.881			
Listening Conditions	Male	293	3.72	.695	-2.199	591	.028
Total Challenges Score	Female	300	3.85	.769			
	Male	293	3.45	.670	-2.540	591	.011
	Female	300	3.60	.727			

Table 5 shows statistically significant differences at the 0.05 level between the means of responses of the study sample to the challenges faced by male and female university students in listening comprehension within online EFL classes based on the gender variable across all domains and the total challenges score, except for the Suitability to Student Proficiency Level domain. The statistically significant differences were in favour of females, indicating that the challenges faced by female students are higher than those faced by male students.

4.2.2 Differences in Listening Comprehension Challenges by Specialisation

The researchers used an independent samples t-test to determine the significance of differences between the means of responses of the study sample members to the challenges faced by university students in listening comprehension within online EFL classes based on the specialisation variable. Figure 4 and Table 6 show these results more visually.

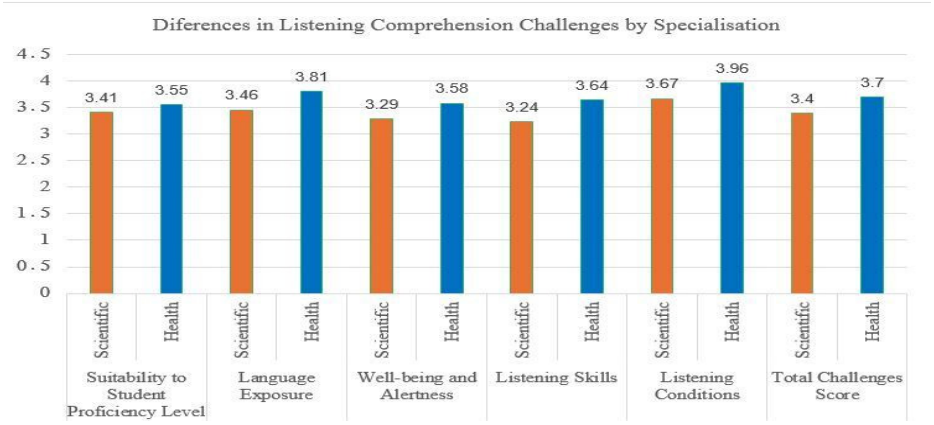

Figure 4. Differences in Listening Comprehension Challenges by Academic Specialisation

Table 6 shows statistically significant differences at the 0.05 level between the means of responses of the study sample to the challenges faced by university students in listening comprehension within online EFL classes based on the specialisation variable across all domains and the total challenges score. The statistically significant differences were in favour of health colleges, indicating that the challenges faced by students in health colleges are higher than those faced by students in scientific colleges.

Table 6. Independent Samples T-test for Differences in Responses to Challenges Faced by University Students in Online EFL Listening Comprehension Classes Based on Specialization

Domain	Specialisation	N	Mean	Std. Deviation	t	df	P-value
Suitability to Student Proficiency Level	Scientific	356	3.41	.792	-2.053	591	.040
	Health	237	3.55	.724			
Language Exposure	Scientific	356	3.46	.862	-4.953	591	.000
	Health	237	3.81	.808			
Well-being and Alertness	Scientific	356	3.29	.846	-4.049	591	.000
	Health	237	3.58	.814			
Listening Skills	Scientific	356	3.24	.832	-5.651	591	.000
	Health	237	3.64	.848			
Listening Conditions	Scientific	356	3.67	.721	-4.758	591	.000
Total Challenges Score	Health	237	3.96	.724			
	Scientific	356	3.40	.684	-5.194	591	.000
	Health	237	3.70	.693			

5. Discussion

This section discusses the challenges faced by Saudi male and female university students in listening comprehension within online English as a Foreign Language (EFL) classes, compared with previous research. It is essential to analyse these challenges, considering the various aspects of online learning and highlighting any gender and specialisation issues that may arise.

5.1 EFL Listening Comprehension Challenges and Domain Breakdown

The study's findings indicate a high overall degree of challenges encountered by EFL students in online listening comprehension, with a mean score of 3.52. This result aligns with previous studies by Hamouda (2013) and Assaf (2015), who identified technical challenges such as poor-quality recordings and equipment as significant impediments, evidenced by a mean Listening Conditions score of 3.78. These findings underscore the necessity of creating an optimal online learning environment with minimal distractions and high-quality audio.

Creating a supportive online learning environment requires specific interventions and institutional support to overcome technical barriers. Teachers need high-quality training and resources to improve self-efficacy and build pedagogical knowledge surrounding technology integration for students' online research and comprehension skills (Van Allen, 2020). Another study showed that the training teacher received significantly changed their attitudes toward online instruction, making it more participatory and interactive than face-to-face instruction (Gold, 2019). In addition, institutional support, such as financial subsidies for devices and internet access, can also play a pivotal role in levelling the playing field for all students. For example, some US educational programs have significantly increased Internet access in schools, with the percentage of classrooms connected to the Internet growing from 3% to 65% between 1993 and 1999 and reaching nearly 100% by 2000 (Roberts, 2000).

Language exposure emerged as another critical barrier, with a mean score of 3.60. This supports the research of Hamouda (2013), Assaf (2015), Nowrouzi et al. (2015), Almilad (2017), Mahmoud and Ahmed (2020), and Alzamil (2021), who all identified insufficient vocabulary, unfamiliar words, lack of background knowledge, and limited topic familiarity as significant barriers for EFL students in online listening tasks. These results highlight the importance of using more authentic listening materials and providing contextualised vocabulary instruction. Incorporating relevant and authentic materials can improve comprehension outcomes by making the content more relatable and meaningful. Teachers should use diverse content that connects to students' fields of study, helping bridge the gap between limited language exposure and effective listening comprehension. As Nowrouzi et al. (2015) stated, "material developers, syllabus designers, and L2 teachers must pay particular attention to learners' utilisation problems" (p. 268).

The suitability of listening materials to student proficiency levels was also a notable difficulty, with a mean score of 3.47. This finding is consistent with previous studies by Hamouda (2013), Nowrouzi et al. (2015), Almilad (2017), and Alzamil (2021), which highlighted how factors such as speech speed, pronunciation, accents, missing sounds, and new vocabulary can significantly hinder EFL students' comprehension. It is recommended that materials be differentiated to suit diverse proficiency levels within a single classroom. Differentiated instruction using the LearningApps online

platform can lead to greater learner emotional engagement, motivation to learn, and better learning performance in foreign language classrooms (Iskarova, 2023). These results highlight the importance of tailoring listening materials and activities to students' specific proficiency levels.

The study also identified well-being and alertness as a challenge, with a mean score of 3.41. This finding aligns with the research of Hamouda (2013), Alzamil (2021), and Mahmoud and Ahmed (2020), who reported that anxiety, lack of attention, and difficulties understanding task instructions were significant impediments to listening comprehension. To enhance well-being, it is essential to create a supportive online learning environment and provide strategies to overcome anxiety in listening classes, including reducing high-speed rates, concentration difficulties, lack of confidence, and nervousness, as well as addressing internet connections, noisy environments, and unsupportive devices (Pratama & Nurkhamidah, 2023). These results suggest that instructors should incorporate strategies to promote student well-being and focus during online listening activities, possibly through interactive and gamified listening tasks that engage students more deeply.

Finally, students' listening skills were seen as a significant issue, with a mean score of 3.40. This is consistent with the findings of Nowrouzi et al. (2015), Almilad (2017), and Mahmoud and Ahmed (2020), who reported problems in recognising significant concepts and retaining information during listening activities. To address these challenges, instructors need to design activities that go beyond passive listening (Ahmed et al., 2021), such as summarisation exercises, note-taking tasks, and regular formative assessments that help students practice and enhance their listening skills over time. These results emphasise the need for instructors to integrate activities that develop students' listening skills beyond merely identifying key ideas.

5.2 Gender Differences

This study discovered statistically significant variations in listening comprehension issues, with females reporting more difficulty across all categories and the overall score (mean score = 3.60). However, this conclusion contradicts earlier research, which found no substantial gender discrepancy in EFL listening comprehension issues (Hamouda, 2013; Assaf, 2015; Nowrouzi et al., 2015; Almilad, 2017; Mahmoud & Ahmed, 2020; Alzamil, 2021). One potential explanation for this discrepancy lies in the online learning environment. According to Ali and Fei (2016), anxiety can be a significant barrier to EFL listening comprehension, particularly among female students in online sessions. Further research is needed to determine the effect of anxiety and other variables that may contribute to the gender discrepancy found in this study.

It is important to explore whether gender-based pedagogical interventions could mitigate these challenges. For instance, providing additional support resources tailored to female students, such as peer mentoring (Pointon-Haas et al., 2023) and stress management workshops, could potentially help reduce anxiety and improve listening comprehension outcomes. Examining how cultural expectations may influence female learners' experiences and participation in online learning environments would also provide deeper insight into these gender differences (Yang et al., 2010).

5.3 Specialization Differences

Specialisation differences also played a significant role in listening comprehension challenges, with the study revealing that students in health institutions faced more obstacles in all areas than those in scientific colleges (mean score = 3.70). According to Hernández López et al. (2019), this might be attributable to differences in past English language exposure or distinct language needs within each area. Contrarily, other studies, like the gender findings, found no significant variations in listening comprehension issues depending on specialisation (Hamouda, 2013; Assaf, 2015; Nowrouzi et al., 2015; Almilad, 2017; Mahmoud & Ahmed, 2020; Alzamil, 2021). These disparate findings indicate the need for more research that takes into account the unique settings (e.g., online learning) and student characteristics (e.g., anxiety levels) that may impact the observed difficulty in EFL listening comprehension.

Discipline-specific listening content designed to cater to the diverse needs of students is warranted. For instance, the development of customised listening modules that use authentic content relevant to students' fields of study may improve comprehension by making the listening tasks more applicable and interesting to learners (Dewi, 2018). Additionally, collaboration between language instructors and subject specialists could lead to more integrated content that aligns with the specific vocabulary and skills needed for each field, thereby enhancing listening comprehension for students in varied disciplines (Zappa-Hollman, 2018).

5.4 Implications and Strategies

The current study underscores the importance of addressing the challenges of listening comprehension faced by Saudi university students in EFL online classes. Acknowledging these challenges emphasises the necessity of implementing

strategies to promote student well-being and listening abilities for Saudi EFL learners, overcoming the unique challenges of online environments. Findings support the application of various strategies by students to improve listening comprehension. Studies by Attia (2002), Amin et al. (2011), Nowrouzi et al. (2014), and Dimassi (2017) highlight the positive correlation between strategic listening and proficiency. Learners who actively employ these strategies demonstrate a better understanding of spoken English. These strategies can be categorised into three main areas: cognitive, metacognitive, and socio-affective.

- **Cognitive Strategies**: Cognitive strategies involve modifying information while listening, such as summarising or recognising key points (Chien & Wei, 1998). For a more profound impact, instructors should provide explicit training on these strategies through scaffolded exercises that transition from guided practice to independent use.
- **Metacognitive Strategies**: Metacognitive strategies focus on planning, monitoring, and assessing the listening process (Dimassi, 2017). Encouraging students to set personal listening goals, reflect on their progress, and self-assess their performance could further strengthen these skills.
- **Socio-affective Strategies**: Socio-affective strategies include controlling emotions and communicating with the speaker (Nowrouzi et al., 2014). Promoting peer collaboration and building a supportive learning community may help students reduce anxiety and feel more comfortable engaging with listening tasks.

By integrating these strategies into their learning processes, students can significantly enhance their listening comprehension skills and overall proficiency in the target language. This holistic approach to addressing listening comprehension challenges is crucial for fostering effective language learning in EFL contexts. Additionally, institutions should consider incorporating training sessions for instructors to effectively use these strategies in online settings, ensuring that the teaching approaches are well-adapted to the unique challenges posed by online EFL education.

6. Conclusion

The current study sheds light on the significant challenges faced by Saudi university students in online EFL listening comprehension classes. The study's findings indicate a high overall degree of challenges encountered by EFL students in online listening comprehension, with a mean score of 3.52. Listening conditions was the first challenge among the study respondents with a mean score of 3.78. Language exposure emerged as another critical barrier, with a mean score of 3.60. The suitability of listening materials to student proficiency levels was also a notable difficulty, with a mean score of 3.47. The study also identified well-being and alertness as a challenge, with a mean score of 3.41. Finally, students' listening skills were seen as a significant issue, with a mean score of 3.40.

The findings revealed significant differences between male and female students in listening comprehension issues, with females reporting more difficulty across all categories. Additionally, the study highlighted substantial differences between students in health and science colleges, with health college students facing more challenges in all areas compared to their counterparts in scientific colleges. These findings underscore the need for improved online learning environments, gender-sensitive approaches, and specialization-specific considerations in EFL instruction. The study also emphasises the necessity of implementing appropriate strategies to address language exposure, develop listening skills, and optimise the online learning environment.

6.1 Research Limitations

Any research is bound to have limitations. One limitation of the current study was that data were collected solely through questionnaires from male and female undergraduate students. Incorporating semi-structured interviews would have been beneficial, as they could have provided a deeper understanding of the challenges of listening comprehension. Additionally, semi-structured interviews might have offered more breadth and enhanced the trustworthiness and triangulation of the data, thereby contributing to the field of education and pedagogy.

6.2 Suggestions for Further Research

Future research should consider employing mixed-method approaches, including both quantitative and qualitative data collection methods, to gain a more nuanced understanding of EFL listening comprehension challenges. Moreover, investigating the impact of anxiety and other psychological factors in different learning environments could provide further insights into gender and specialisation differences. By addressing these limitations and

exploring these areas, future studies can offer more robust recommendations for improving EFL listening comprehension among Saudi university students.

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