Article

Factors Influencing Distraction Among EFL College Students: The Role of Gender and Academic Year

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Abstract: This study investigated the factors that influence students to be distracted during class in English as a Foreign Language (EFL) class rooms, along with differences by gender and academic year. Ninety-nine EFL college students completed a questionnaire covering four categories: Technology and Multitasking, Environmental and External Distractions, Course Content and Teaching Methods, and Learning Motivation and Psychological Factors. The results showed that female students reported slightly higher distraction levels overall, especially related to multitasking behaviors, while senior students were less affected by environmental disruptions. Among female students, the highest distraction was observed in Category 2, while the lowest was in Category 4 (M = 3.27). The results suggest that classroom distraction is a complex issue requiring thoughtful, flexible solutions. These findings highlight the importance of developing targeted strategies to reduce distraction and support student focus in technology-enhanced classroom settings, where managing attention has become increasingly challenging.

1. Introduction

Over the last ten years, student distraction has become a growing problem in university classrooms. Earlier studies have seen technology as a tool to keep students engaged. For instance, Sun (2014) found that using classroom tools like polling systems could improve students' focus and motivation. However, more recent studies provide different views that technology is now often a source of distraction rather than support. Iluzada et al. (2022) revealed that using personal devices during class can lower attention levels and leave students less satisfied with their learning experience. Similarly, Flanigan et al. (2023a) highlighted how digital distractions, such as mobile notifications and multitasking, have become a common struggle for students, especially in universities. These findings showed that classroom distractions are becoming a bigger issue and raise concerns about how they affect students' focus, motivation, and academic performance.

Instructors have increasingly noticed this change. Many studies reported that keeping students' attention during lessons is more difficult than it used to be, especially with the constant presence of smartphones and other digital tools. Flanigan and Babchuk (2022) and Flanigan et al. (2023b) found that mobile phone use for non-academic purposes often disrupts instruction flow and student engagement. Similarly, Ober et al. (2023) observed that although students and teachers recognized the downsides of device use during class, students tend to underestimate its effects more than instructors. These findings suggest a disconnect in perceptions that may affect how distractions are managed in the classroom.

Beyond prior studies, recent empirical research further explores the impact of distraction on learning outcomes. A study conducted in Taiwan by Liao and Wu (2022) used multimodal learning analytics to examine how digital distractions affect students' academic performance. The results showed that frequent off-task behaviors like browsing social media or messaging apps significantly hinder students' ability to concentrate and perform well. Building on these insights, this study aims to investigate the familiar sources of distraction that students experience in EFL classrooms and explore whether these change depending on gender or academic year.

2. Literature Review

2.1. Definition and Classification of Student Distraction

Student distraction is a shift of attention away from learning tasks, often triggered by internal thoughts or external interruptions (Smallwood & Schooler, 2006). Based on Kahneman (1973) theory of attention and effort, the allocation of attention was constrained by cognitive limitations, making learners particularly susceptible to distraction when multiple stimuli are present. Furthermore, cognitive load theory (Sweller, 1994) posited that learners have limited mental resources, and an overload of tasks or stimuli could lead to reduced attention. Some factors could lead students to lose focus during class. According to Le (2021), these distractions can be categorized into internal and external factors. Internal factors include personal and physical characteristics, including exhaustion, mood, or individual learning styles, that can affect a student's ability to stay engaged. In contrast, external factors involve influences outside the student, such as the school environment, classroom setting, or family-related expectations.

Building on previous research, this study classifies student distractions into four categories: technology and multitasking, environmental and external distractions, course content and teaching methods, and learning motivation and psychological factors. The first category is Technology and Multitasking, which involves using electronic devices such as smartphones and laptops. These devices can divert students' attention from lessons and lead to off-task behaviors (Aivaz & Teodorescu, 2022). The second category is Environmental and External Distractions, which is about classroom noise, seating arrangement, and peer interactions. These elements could affect students' concentration ability (Bunce et al., 2010). The third category covers Course Content and Teaching Methods. When the material is too dull or rigid, students may lose focus and disengage in class (Bang et al., 2024). Finally, the fourth category is Learning Motivation and Psychological Factors, such as achievement and well-being orientations, which are crucial in determining students' ability to stay focused in class. Even when students avoid off-task temptations, distractions can negatively affect their motivation and learning outcomes (Kilian et al., 2010).

Student distractions come from internal and external factors, which can be further classified into four types. This helps identify the causes of distraction and encourages further discussion.

2.2. Gender and Distraction in EFL College Students

Gender differences in language learning have been a key point of academic research, with implications for understanding learning styles, strategies, and achievement gaps. According to Kheder and Rouabhia (2023), female learners often perform better in vocabulary retention, verbal fluency, and interpersonal communication strategies, which help in language acquisition. On the other hand, male learners tend to exhibit strengths in using tech tools to study by themselves. These differences between genders show the need for special teaching methods in English as a Foreign Language (EFL) classes, ensuring all students get good schooling practices.

In addition to cognitive and strategic differences, gender may influence behavioral aspects such as attention and focus during learning activities. Research has shown that gender differences significantly affect EFL learning outcomes. For example, a study on Indonesian college students utilizing inquiry-based learning indicated that female students showed higher academic performance than male students. This difference highlights potential gender-related variations in focus and engagement during learning tasks (Laoli et al., 2023).

College students often face challenges paying attention in class due to internal and external distractions. From an internal perspective, factors such as students' interest in and ability to understand the subject significantly affect their concentration level. Physical conditions such as fatigue, hunger, or illness can further distract them, while personal characteristics such as a lack of motivation can exacerbate these effects. External factors, such as the classroom environment, including seating arrangements, lighting, and background noise, can significantly impact disruptions. Furthermore, the quality of the syllabus and teaching methods directly affects students' attention. As Le (2021) discussed, these general factors provide essential context for understanding that all learners, regardless of gender, may experience difficulty focusing. However, earlier findings suggest that male and female students may differ in how they respond to or manage such distractions.

2.3. The Role of Academic Year in Student Distraction

Staying focused in class often depends on how effectively students manage cognitive demands. According to Rummel et al. (2024), when mental workload increases, students are more prone to internal distractions like wandering thoughts and external ones, such as surrounding noises. The findings also suggested that students with better attentional control are generally more capable of managing these distractions. This might explain why some learners remain focused despite similar learning conditions.

In a university context, especially for those in the early years, students are influenced by various factors. First-year students often struggle to adapt to their new environment, making them more likely to be distracted. Agingu et al. (2022) observed that

distractions from social media, personal relationships, or simply managing daily life independently often affect students' ability to stay engaged, especially during college life transitions.

Digital distractions are a universal challenge regardless of the academic year. Whether first-year students or seniors, many students engage in off-task behaviors like texting, checking social media, or casually browsing during lectures. Flanigan et al. (2023a) noted that these behaviors can significantly disrupt focus and negatively affect academic performance. Pérez-Juárez et al. (2023) also mentioned that this issue is prevalent across all year levels, and digital distractions are now a common struggle among college students. While students' academic year may influence how they experience university life, managing distraction in a technology-driven environment is a shared challenge for learners at all stages.

3. Methodology

3.1. Participants

The participants in this study were undergraduate students from a technology university in Taiwan. A total of 99 students participated, including 28 males and 71 females. Most participants were from the Department of Applied English, while the rest were from the Department of Communication Arts. Table 1 shows the demographic characteristics of study participants.

Table 1. Demographic characteristics of study participants.

Participants	99		
Gender	**Male:** 28 (28%)	**Female:** 71 (72%)	
Academic Level	**Sophomore:** 15 (15%)	**Junior:** 59 (60%)	**Senior:** 25 (25%)

3.2. Data Collection and Data Analysis

The questionnaire explored the possible factors contributing to students' distraction during class. It consisted of 15 items divided into two sections. The first section collected demographic information, including gender and academic levels, while the second section focused on students' experiences of distraction. All items were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Data was collected through an online Google Forms survey. Participants completed the questionnaire at the end of the semester, reflecting on their learning experiences and providing self-assessments. Participation in this study was voluntary and anonymous to ensure the privacy and confidentiality of the respondents.

The questionnaire was designed to investigate the causes of student distraction. According to previous literature, various factors contribute to classroom distractions. Schwartz (2021) found that self-distractions, such as texting, playing online games, using social media during class, and external distractions from the classroom environment and equipment, made it difficult for students to maintain focus. These distractions negatively impacted their academic performance. Teachers' classroom management strategies are closely related to students' ability to stay attentive. How teachers handle students' misbehavior in class influences their concentration level. Research has shown that aggressive behavior is a significant factor contributing to inattention. In contrast, rewards, discussions, and prompting techniques effectively minimize distractions (Tran, 2015). Multitasking with electronic devices in the classroom significantly increases distraction levels, affecting both the students engaged in multitasking and those around them (Aivaz & Teodorescu, 2022). Although developed in an online learning context, Borup et al. (2020) highlighted that technical issues, lack of family support, and diminished student confidence are all factors that can hinder attention. These elements are also relevant to in-person classrooms. Furthermore, low confidence in learning may contribute to increased distraction and reduced focus during class. Based on previous research findings, Table 2 presents the formulated items and questionnaire structure. The data collected were analyzed using SPSS, generating descriptive statistics such as mean scores, standard deviations, and percentages of 1 (Strongly Disagree) and 5 (Strongly Agree) for each item. In addition to descriptive statistics, inferential statistical analyses were conducted to examine group differences. Independent samples t-tests were used to explore whether gender significantly influenced students' reported distraction levels, while one-way ANOVA was applied to assess potential differences across academic years. These analyses aimed to determine whether the observed patterns were statistically significant beyond descriptive trends.

<div align="center">**Table 2.** Factors Contributing to Students' Distraction.</div>

Number	Item
Q1	I often get distracted by phone notifications.
Q2	I get distracted by the behavior of other students.
Q3	I get distracted by the behavior of other students.
Q4	I find it hard to focus when the course content is too difficult.
Q5	I lose focus when the course content is too easy.
Q6	I get distracted by the classroom environment (e.g., noise or uncomfortable seating).
Q7	I get distracted by multitasking (e.g., doing other things simultaneously).
Q8	I have been distracted due to a lack of clear learning goals.
Q9	I find it hard to focus when the teacher's pace is too fast or too slow.
Q10	I get distracted by the behavior of other members during group activities.
Q11	I lose focus in class due to external issues (e.g., personal life or stress).
Q12	I get distracted by using technology in class (e.g., operational difficulties).
Q13	I get distracted due to a lack of confidence in the class content.
Q14	I lose focus due to a lack of achievement in classroom activities.
Q15	I find it hard to focus when long periods of concentration are required in class.

4. Results

4.1. Student Distraction During Class

The participants were asked to give a response as they reviewed their learning experience, and descriptive statistics were used to summarize the data collected from 99 participants (Table 3).

<div align="center">**Table 3.** Descriptive statistics and agreement levels of student distraction factors.</div>

Items	N	Mean	Standard deviation	Agreement 5	Disagreement 1
Q1	99	3.47	1.110	19%	5%
Q2	99	3.18	1.164	14%	11%
Q3	99	3.37	1.183	22%	6%
Q4	99	3.22	1.130	13%	9%
Q5	99	3.12	1.163	16%	8%
Q6	99	3.57	1.135	24%	6%
Q7	99	3.28	1.254	21%	11%
Q8	99	3.33	1.204	19%	9%
Q9	99	3.31	1.226	18%	9%
Q10	99	3.12	1.231	18%	10%
Q11	99	3.39	1.159	17%	9%
Q12	99	2.93	1.189	10%	13%
Q13	99	2.95	1.215	12%	13%
Q14	99	3.04	1.133	10%	9%
Q15	99	3.23	1.132	13%	9%

The mean scores for Q6 (M = 3.57), Q1 (M = 3.47), and Q11 (M = 3.39) indicated that classroom environment, phone notifications, and external issues were the most influential factors affecting students' attention in class. The classroom environment (e.g., noise or uncomfortable seating) had the highest mean score, suggesting it was the most significant distraction. It is possible that when noise was created in the classroom, students lost focus as they became curious about the noise source, or they were disengaged from the lesson due to discomfort caused by seating arrangements. Phone notifications ranked second, meaning many students felt distracted by incoming messages or alerts. External issues, such as personal life and stress, ranked third, showing that factors beyond the classroom could also interfere with students' ability to concentrate. These findings highlight the importance of creating a comfortable and distraction-free learning environment to help students focus during class (Table 4).

Table 4. The top three distractions are based on mean scores from the questionnaire.

Items	Question	Mean	Rank
Q6	I get distracted by the classroom environment (e.g., noise or uncomfortable seating).	3.57	1
Q1	I often get distracted by phone notifications.	3.47	2
Q11	I lose focus in class due to external issues (e.g., personal life or stress).	3.39	3

The mean scores for Q12 (M = 2.93), Q13 (M = 2.95), and Q14 (M = 3.04) indicate that technology difficulties, confidence in class content, and a lack of achievement in class activities were relatively less influential in causing student distraction. Among these, technology-related difficulties had the lowest mean score, implying that only a small portion of students experienced inattention due to technical problems during class. Similarly, confidence in class content appeared to have a limited impact on focus, with only a small percentage of students feeling less confident. Lastly, a lack of a sense of achievement in classroom activities ranked slightly higher, but its influence on distraction remained relatively minor compared to other factors. Overall, these findings indicate that while these factors may contribute to distraction to some extent, they are not the primary causes of inattention in class (Table 5).

Table 5. The bottom three distractions are based on mean scores from the questionnaire.

Items	Question	Mean	Rank
Q12	I get distracted by using technology in class (e.g., operational difficulties).	2.93	1
Q13	I get distracted due to a lack of confidence in the class content.	2.95	2
Q14	I lose focus due to a lack of achievement in classroom activities.	3.04	3

4.2. Types of Student Distraction

The questionnaire items were categorized based on their content to facilitate the analysis. Questions related to distractions caused by electronic devices (e.g., phone notifications) or multiple tasks were grouped under Technology and Multitasking-related distractions (TM) (Category 1), while those related to classroom environment classroom influence were assigned to the Environmental and External Distractions-related distractions (EED) (Category 2), those related to course content and teachers teaching method were grouped under Course Content and Teaching Methods-related distractions (CCTM) (Category 3), and those related to personal emotions or external circumstances were categorized as Learning Motivation and Psychological Factors-related distractions (LMPF) (Category 4). This categorization was used to examine the relative impact of distractions on students' attention in class. The category of the questionnaire items and the mean scores and standard deviations of each category were provided in Table 6.

Table 6. Categories and items of the questionnaire.

Category	Items	Question	N	Mean	Standard Deviation
TM **(Category 1)**	Q1	I often get distracted by phone notifications.	3	3.23	0.274
	Q7	I get distracted by multitasking (e.g., doing other things simultaneously).			
	Q12	I get distracted by using technology in class (e.g., operational difficulties).			
EED **(Category 2)**	Q2	I get distracted by the behavior of other students.	4	3.32	0.206
	Q6	I get distracted by the classroom environment (e.g., noise or uncomfortable seating).			
	Q10	I get distracted by the behavior of other members during group activities.			
	Q11	I lose focus in class due to external issues (e.g., personal life or stress).			

<center>**Table 6.** *Cont.*</center>

Category	Items	Question	N	Mean	Standard Deviation
CCTM (Category 3)	Q3	I get distracted by the behavior of other students.	4	3.26	0.109
	Q4	I find it hard to focus when the course content is too difficult.			
	Q5	I lose focus when the course content is too easy.			
	Q9	I find it hard to focus when the teacher's pace is too fast or too slow.			
LMPF (Category 4)	Q8	I have been distracted due to a lack of clear learning goals.	4	3.14	0.173
	Q13	I get distracted due to a lack of confidence in the class content.			
	Q14	I lose focus due to a lack of achievement in classroom activities.			
	Q15	I find it hard to focus when long periods of concentration are required in class.			

Note: TM= Technology and Multitasking, EED= Environmental and External Distractions, CCTM= Course Content and Teaching Methods, LMPF= Learning Motivation and Psychological Factors
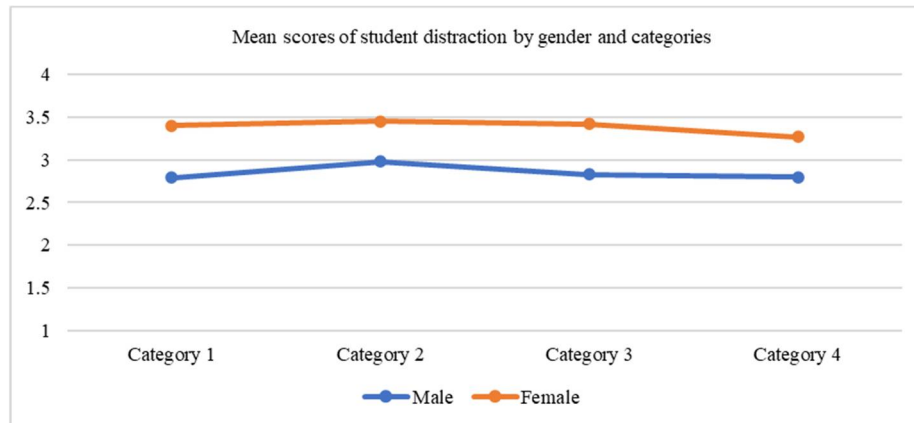
4.3. Gender and Student Distraction

This section indicates the differences between male and female students regarding the factors contributing to their distraction. Table 7 presents the means and standard deviations for the four categories of distraction factors with both male and female students. For male students, Category 2 had the highest mean distraction score (M = 2.98), whereas Category 1 had the lowest (M = 2.79). Among female students, the highest distraction was observed in Category 2 (M = 3.45), while the lowest was in Category 4 (M = 3.27). The most significant difference was found in Category 1, where female students (M = 3.40) were more distracted than male students (M = 2.79). As a result of Table 7, male and female students tended to be more distracted by Categories 2 and 3. Fig. 1 the mean scores for male and female students.

<center>**Table 7.** Distraction and the category of male and female students.</center>

Category	Items	N		Mean		Standard deviation	
		Male	Female	Male	Female	Male	Female
TM (Category 1)	Q1	28	71	3.11	3.62	1.257	1.019
	Q7	28	71	2.93	3.42	1.412	1.167
	Q12	28	71	2.32	3.17	1.219	1.095
	Mean average			2.79	3.40		
EED (Category 2)	Q2	28	71	2.86	3.31	1.239	1.116
	Q6	28	71	3.18	3.72	1.307	1.031
	Q10	28	71	2.75	3.27	1.323	1.171
	Q11	28	71	3.11	3.51	1.499	0.984
	Mean average			2.98	3.45		
CCTM (Category 3)	Q3	28	71	3.00	3.52	1.217	1.145
	Q4	28	71	2.86	3.37	1.297	1.031
	Q5	28	71	2.68	3.30	1.188	1.113
	Q9	28	71	2.79	3.52	1.371	1.107
	Mean average			2.83	3.42		
LMPF (Category 4)	Q8	28	71	3.04	3.45	1.401	1.106
	Q13	28	71	2.54	3.11	1.290	1.153
	Q14	28	71	2.68	3.18	1.278	1.046
	Q15	28	71	2.93	3.35	1.303	1.043
	Mean average			2.80	3.27		

Note: TM= Technology and Multitasking, EED= Environmental and External Distractions, CCTM= Course Content and Teaching Methods, LMPF= Learning Motivation and Psychological Factors

Fig.1. Mean scores of student distraction by gender and categories.

Independent-samples t-tests were conducted to examine whether gender differences existed in students' distraction types. As shown in Table 8, female students reported significantly higher levels of distraction than male students in four categories: Technology and Multitasking (p =0.003), Environmental and External Distractions (p = 0.024), Course Content and Teaching Methods Learning (p = 0.005), and Motivation and Psychological Factors (p = 0.028). These results align with the previous descriptive findings, in which females consistently showed higher mean scores across all distraction dimensions.

Table 8. Independent-Samples t-test results for distraction categories by gender.

Distraction Category	Male (n = 28)		Female (n = 71)		t	p
	M	SD	M	SD		
TM	**2.78**	1.06	3.40	0.83	-3.078	0.003
EED	2.97	1.08	3.45	0.87	-2.294	0.024
CCTM	2.83	1.09	3.43	0.85	-2.887	0.005
LMPF	2.79	1.13	3.27	0.89	-2.234	0.028

Note: TM= Technology and Multitasking, EED= Environmental and External Distractions, CCTM= Course Content and Teaching Methods, LMPF= Learning Motivation and Psychological Factors
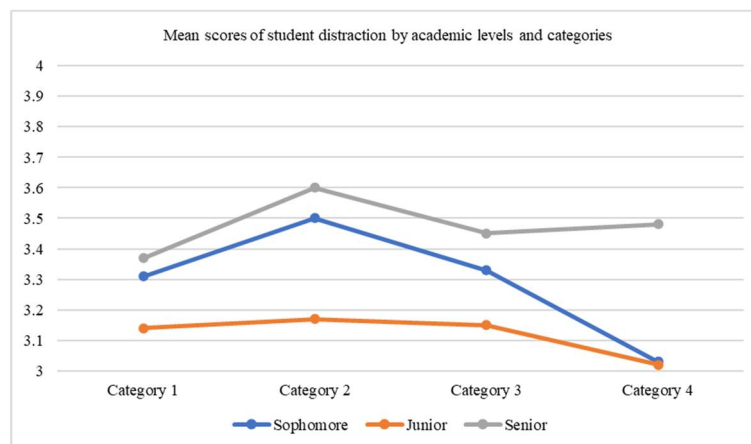
4.4. Academic Levels and Student Distraction

The results showed the differences among sophomore, junior, and senior students regarding the elements that lead to distraction. Table 9 displays the means and standard deviations for the four categories of distraction factors across students of different academic years. For sophomore students, Category 2 had the highest mean distraction score (M = 3.50), while Category 4 had the lowest (M = 3.03). Similarly, for junior students, the highest distraction was observed in Category 2 (M = 3.17), while the lowest was in Category 4 (M = 3.02). Among senior students, the highest distraction was observed in Category 2 (M = 3.60), while the lowest was in Category 1 (M = 3.37). The most considerable difference was observed in Category 4, where senior students (M = 3.48) reported higher distraction levels than sophomores (M = 3.03) and junior students (M = 3.02). As shown in Table 9, students across all academic years, sophomore, junior, and senior, were most distracted by Category 2. Figure 2 summarizes the mean scores for students at different educational levels.

Table 9. Distraction and categories of different academic levels.

Category	Items	Sophomore		Junior		Senior	
		Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
TM (Category 1)	Q1	3.47	1.060	3.42	1.192	3.60	0.957
	Q7	3.47	1.302	3.20	1.256	3.36	1.254
	Q12	3.00	0.926	2.81	1.167	3.16	1.375
	Average	3.31		3.14		3.37	
EED (Category 2)	Q2	3.53	1.246	3.03	1.144	3.32	1.145
	Q6	3.67	1.047	3.51	1.150	3.68	1.180
	Q10	3.13	1.246	2.92	1.164	3.60	1.291
	Q11	3.67	0.900	3.20	1.186	3.80	1.041
	Average	3.50		3.17		3.60	
CCTM (Category 3)	Q3	3.53	0.990	3.20	1.243	3.68	1.108
	Q4	3.40	1.056	3.19	1.152	3.20	1.155
	Q5	3.00	1.163	3.00	1.130	3.44	1.227
	Q9	3.40	1.121	3.22	1.260	3.48	1.229
	Average	3.33		3.15		3.45	
LMPF (Category 4)	Q8	3.40	1.242	3.12	1.205	3.80	1.180
	Q13	2.73	1.163	2.92	1.179	3.16	1.344
	Q14	2.87	1.060	2.97	1.082	3.32	1.282
	Q15	3.13	0.990	3.08	1.087	3.64	1.254
	Average	3.03		3.02		3.48	

Note: TM= Technology and Multitasking, EED= Environmental and External Distractions, CCTM= Course Content and Teaching Methods, LMPF= Learning Motivation and Psychological Factors

Fig. 2. Mean scores of student distraction by academic levels and categories.

5. Discussion and Conclusion

This study investigated the factors that influence students to be distracted in the EFL classroom. The results showed that students were most frequently distracted by environmental factors, phone notifications, and personal or emotional issues. In contrast, distractions related to technology use, lack of confidence, and achievement in class activities were reported less often, suggesting that students may be accustomed to using digital tools in academic contexts. Among the four categories, Environmental and External Distractions, such as noise and seating, had the highest average scores, while Learning Motivation and Psychological Factors were the least distracting. Both male and female students identified environmental distractions as the primary source, with slightly higher scores among female participants. Independent-samples t-tests revealed significant gender differences across all distraction categories, while ANOVA results showed no significant differences based on academic year. This suggests that gender may influence how distraction is experienced, but academic standing does not.

These findings are consistent with previous research emphasizing the influence of environmental factors on student attention. For instance, Le (2021) pointed out that classroom noise, lighting, and peer behavior can significantly disrupt concentration. This aligns with cognitive load theory, which posits that excessive external stimuli can overload students' working memory and reduce their ability to focus (Sweller, 1994). Interestingly, while many studies, including Flanigan et al. (2023b), stress the role of digital devices in diminishing focus, the present results suggest that technology was less distracting, potentially due to students' increasing digital literacy. Gender-related patterns were also in line with findings by Laoli et al. (2023), indicating that female students may be slightly more sensitive to distraction. Finally, the findings showed that students across different year levels were similarly affected by digital distractions, aligning with Pérez-Juárez et al. (2023).

This study has several limitations. First, the data relied solely on self-reported questionnaires, which may be influenced by personal bias. Second, the sample included most female participants, which could limit the generalizability of gender-related findings. Future research could use larger, more gender-balanced samples and consider observational or qualitative methods to complement survey data.

In summary, reducing distractions in the classroom is key to helping students stay engaged. EFL instructors could consider decreasing background noise, delivering lessons clearly and engagingly, and being aware of students' emotional needs. Since distraction affects students differently, it is also essential for teachers to adapt their strategies based on factors like gender and academic year. The results showed that classroom distraction is a complex issue requiring thoughtful, flexible solutions.

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