Exploring The Factors Affecting Classroom Participation in The Saudi EFL Virtual Learning Classrooms During Covid-19 Pandemic

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Abstract

During the COVID-19 pandemic, the sudden shift from face-to-face to virtual learning classrooms impacted students' performance in the classroom, including English as a Foreign Language instruction in Saudi Arabia. Since students' learning depends upon their participation in physical classroom activities and discussions, the present study focuses on understanding the factors that influence the participation of King Abdul Aziz University preparatory year students in the full virtual learning environment. Following a quantitative research approach, an online questionnaire with 165 participants was utilized for data collection and statistically analyzed using SPSS software. The analyzed data indicated that eight factors strongly influenced students' participation: virtual learning environment, learning environment at home, teacher, grades, class activities, internet, instructional support and feedback, and social lockdown. The findings provide valuable insights for EFL instructors who wish to adapt their instructional approaches to create an engaging virtual learning environment that encourages active participation through class discussions and activities. The study offers recommendations to improve participation in the virtual learning environment.

Keywords: classroom participation, factors, COVID-19 pandemic, virtual learning environment, Saudi EFL learners

1. Introduction

During the COVID-19 pandemic, educational institutions faced the challenge to ensure the continuity of learning while prioritizing the health and safety of students and educators. As the rest of the world, the Saudi Arabian government ordered the closure of all schools and universities, and virtual learning emerged as an alternative to the physical classroom, allowing students to continue their education remotely.

As all Saudi universities, King Abdulaziz University (KAU) quickly adapted to the new educational landscape. English Language (EFL) students suddenly found themselves navigating the uncharted territory of virtual classrooms, and this sudden transition profoundly impacted their participation in classroom activities and discussions, while presenting new opportunities and challenges, thereby raising questions about student participation and its influencing factors.

Classroom participation is essential for student learning and academic success (Theriault, 2019), and the sudden shift from blended and face-to-face learning to virtual learning has affected students' performance levels (Qunfei, Abdullah, & Mustapha, 2020). This study draws from observations in the virtual EFL classrooms as part of a postgraduate teaching practicum in KAU, Saudi Arabia, which indicated measurable differences in the level of classroom participation. Therefore, this study aimed to explore the factors influencing student participation in the virtual learning environment (VLE) during the recent pandemic, thereby addressing the existing research gap.

2. Literature Review

This section provides a comprehensive review of the existing literature on VLE, student participation, and its influencing factors. Besides, it discusses specific factors identified in the previous research that may influence student participation in VLE. The review sets the foundation for understanding the research problem and guides the subsequent sections of this paper.

2.1 Factors Influencing Participation and Engagement in Virtual Classrooms

The COVID-19 pandemic has had a significant impact on education in Saudi Arabia. As educational institutions transitioned to online and remote learning, EFL teachers and students were forced to adapt to new modes of instruction and challenges, leading to the emergence of VLE. While virtual learning offers flexibility and convenience; however, it also presents unique challenges that can affect student participation. These challenges encompass various aspects, including VLE, home environment, internet connectivity, teacher's role, interaction and support, feedback mechanisms, engaging activities as well as grading and evaluation.

2.1.1 Virtual Learning Environment (VLE)

VLE profoundly impacts students' participation in online learning classrooms. It significantly influences how students engage, interact, and actively participate in their online learning experiences. Flexibility and convenience are important factors in VLE (Al-Nofaie, 2020; Singh, 2020). Learning at their own pace allows students to participate at convenient times, and new features enable collaboration and meaningful discussions to offer personalized learning experiences with multimedia resources and interactive simulations that cater to diverse learning needs.

However, VLE also presents challenges to student participation. Technology gaps, connectivity issues, large class sizes, and limited student-teacher interaction have made participation and engagement more challenging (Alghamdi, 2021). It is also crucial to address technological limitations, pedagogical considerations, resource constraints, and learner support to ensure effective virtual learning experiences (Alkabaa, 2022). Furthermore, the digital divide can hinder students' ability to participate fully in online learning (van Deursen & Helsper, 2015). The most common technical challenges associated with online learning at home were explored by Almekhlafy (2020) who found that the challenges associated with internet use contributed to increased stress and anxiety among students, thus hindering their ability to complete schoolwork and actively participate in class activities (AlJhani, Alateeq, Alwabili, & Alamro, 2022; Alghamdi & Yanbu, 2021).

2.1.2 Home Learning Environment

A supportive and conducive home learning environment can increase students' participation, while a supportive home learning environment positively influences student engagement (Aljuaid, 2021), in addition to the positive relationship between parental involvement and academic achievement (Benjamin, Abishek, Dewi, Sivaram, & Prasetyo, 2021). The home learning environment and self-efficacy predicted student engagement, with home environment exerting a more substantial effect (Basri, Mohktar, Abdullah, & Aspanut, 2021).

Further, students with greater access to resources and technology were more likely to be engaged in online learning (Alqahtani & Omira, 2022), while motivated students with such access demonstrated higher levels of engagement (AlJhani et al., 2022). Adequate access to digital tools, software, and online learning platforms enables students to participate fully in activities, collaborate with colleagues, and complete tasks effectively.

On the other hand, negative factors such as limited access to technology, inadequate internet connection, and a noisy and distracting home environment can impede students' participation, in addition to lack of parental support, lack of structure, and competing responsibilities at home. The lack of motivation, support from parents and teachers, and technical difficulties are the most common challenges (Aljuaid, 2021). Besides, the home learning environment can be a source of stress and anxiety for students. A quiet study space, access to necessary resources and technology, and support from parents and teachers can foster student engagement (Alqahtani & Omira, 2022). The studies highlighted students' multifaceted challenges in the home learning environment, including motivation, support, emotional well-being, environmental factors, and access to resources.

2.1.3 Teacher's Role

Positively engaged and supportive teachers can foster active student participation by setting clear expectations, providing timely feedback, and creating opportunities for collaboration and interaction (Al-Nofaie, 2020). Further, creating a positive learning environment and employing active learning strategies influenced student engagement positively (Bahanshal & Khan, 2021). Responsive and accessible teachers who actively facilitate discussions and encourage student contributions can promote a sense of community and engagement among students (Alsobhi, Meccawy, & Meccawy, 2021), which creates a supportive and inclusive atmosphere that encourages participation. Instructor support is crucial in promoting student engagement in online learning (Werang & Radja Leba, 2022). Students with supportive instructors are more likely to report higher engagement and satisfaction (Werang & Radja Leba, 2022), even when considering controlling factors like student motivation and self-efficacy (Bahanshal & Khan, 2021). Instructor support is more critical for student engagement in online learning compared to traditional face-to-face learning (Alshathri & Male, 2020).

Interactive activities require active participation and critical thinking. Interactive whiteboards can enhance student engagement, participation, understanding of learning material, and motivation (Kite, Al-Zahrani, & Al-Hussaini, 2021). However, the engagement levels are higher when students can interact with their instructors and peers (Oraif & Elyas, 2021). In addition, collaborative activities promote social interaction and peer learning online (Alahmadi & Alraddadi, 2020; Miao, Chang, & Ma, 2022)

Furthermore, technical difficulties or teachers' lack of technological skills can negatively impact student participation. Technological skills among Saudi Arabian university teachers positively impacted students' engagement in online learning (Algethami, 2022), thus highlighting the importance of creating interactive and engaging learning experiences. Conversely, teachers' inadequate technological skills adversely affect students' perceptions (Hakim, 2020). Both studies emphasized the need for teachers to possess practical technological skills to deliver instruction, provide feedback, and communicate with students, thereby promoting engagement and fostering positive perceptions of online learning.

2.1.4 Interaction

Peer-to-peer interaction in online learning classrooms promotes active student participation through collaborative discussions, group projects, and virtual teamwork (Miao et al., 2022) and helps students develop a sense of community and belonging which supports their learning engagement (Sugden, Brunton, MacDonald, Yeo, & Hicks, 2021).

Further, students with higher levels of interaction with their teachers are more likely to be engaged in online learning (Al-Nofaie, 2020), while those who receive regular feedback achieve higher grades (Ahmed, Thomas, & Farooq, 2021). The use of interactive tools and technologies enhances student participation in online learning, as students who utilize interactive tools tend to achieve higher grades (Sugden et al., 2021). Additionally, using interactive tools makes the learning experience more exciting and enjoyable (Alahmadi & Alraddadi, 2020).

Interaction is vital in shaping students' participation in online learning classrooms. Peer-to-peer interaction, interaction with instructors, and interactive tools contribute to a dynamic and engaging learning environment.

2.1.5 Grades and Evaluation

Grades serve as a form of extrinsic motivation by providing a measurable indicator of students' performance and achievement. Regular feedback and formative assessments are associated with increased motivation and higher grades in online learning (Al-Awaid, 2022; Hilliard, Kear, Donelan, & Heaney, 2020). However, AlJhani et al. (2022) found a link between excessive grade focus, anxiety, and stress, which can lead to decreased motivation and participation, while clear and timely feedback helps maintain student motivation (Alahmadi & Alraddadi, 2020; Oraif & Elyas, 2021). Online grading and evaluation tools enable teachers to provide timely and detailed feedback, identify struggling students, and offer additional support (Alsobhi et al., 2021), thus leading to increased engagement and active involvement in the learning process.

However, online students achieve lower grades than others, thus negatively impacting academic performance (Al-Awaid, 2022; Hilliard et al., 2020) and are more likely to experience stress and anxiety. One the other hand, plagiarism in the online environment has increased (Al-Awaid, 2022). Both studies emphasized the need for effective evaluation methods and a balanced approach that prioritizes genuine learning and student well-being.

2.1.6 COVID-19 Pandemic and Lockdown

The COVID-19 pandemic profoundly impacted students' participation in online learning classrooms. With the sudden shift from traditional face-to-face instruction to remote learning, students and educators faced certain challenges when adapting to the new online learning environment.

One of the primary impacts of the lockdown was the disruption of students' routines and learning environments. Studies examining the development of online learning in Saudi Arabia revealed common difficulties such as technical issues, lack of motivation, and feelings of social isolation (Abdelwahed, Aldoghan, Moustafa, & Soomro, 2023; Aldaghrı & Oraıf, 2022). The social aspects missed by students were highlighted by Kite et al. (2021), as well as the potential negative impact of lenient online exams. As for the mental health, students experienced heightened stress related to loneliness, familial concerns, curriculum demands, and examination anxiety (Alateeq, Alasmari, Alfarraj, & Aldosari, 2022). Besides, the absence of personal contact with peers and instructors negatively impacted students' motivation and engagement (Alahmadi & Alraddadi, 2020).

However, the lockdown also led to some positive changes in online learning participation. The rapid adoption of technology and online platforms forced educators to explore innovative instructional strategies to enhance student engagement. Miao et al. (2022) found that online students performed significantly better than their counterparts.

On the other hand, Altuwairesh (2021) found that female students had higher participation and performance rates than male students.

The lockdown significantly impacted students' participation in online learning classrooms. While it presented challenges related to disruption, limited social interaction, and educational inequality, it also prompted educators to explore new approaches and technologies to enhance student engagement.

2.2 Research Objectives

Our knowledge of the factors affecting participation of EFL leaners in virtual learning classrooms in Saudi Arabia is based on minimal data; therefore, the primary objective of this study was to increase the data available on these factors focusing on ELI-Science track (ELI-S) virtual classrooms in KAU. By examining the factors, we aimed to gain a comprehensive understanding of the dynamics at play in this new educational environment and support the development of effective strategies and interventions to enhance student engagement and participation.

2.3 Research Gap and Research Questions

The previous studies conducted in Saudi Arabia focused on investigating the perceptions, benefits, and challenges of virtual learning methods. Hence, there was a need to address the factors influencing student participation in virtual learning classrooms. This research aimed to fill this gap by examining the inhibitive and encouraging factors influencing virtual learning participation by answering the following research question: What factors affect classroom participation in KAU's ELI-S virtual learning classrooms?

3. Method

The present study investigated the factors affecting classroom participation in a full ELI-S VLE. This study employs a quantitative-research approach adapted from the framework proposed by Creswell (2011). A Google Forms questionnaire was created to gather students' perspectives on the factors influencing classroom participation during the COVID-19 pandemic. The quantitative component utilized a questionnaire comprising items on a scale to gather quantitative data to provide a more comprehensive and robust understanding of the research phenomenon.

3.1 Population Sample

Female learners in the ELI preparatory year at KAU were invited to participate in the study. The survey included ELI-S track students at all levels: ELI-S 101, 102, 103, and 104. According to the ELI Faculty Handbook 2021, ELI-S students range from beginner to intermediate (A1 to B1 CEFR). Quantitative data was collected through random sampling using a questionnaire. The sample consisted of 165 Saudi ELI-S track female students who agreed to participate.

3.2 Instruments and Procedures

3.2.1 Questionnaire

Collecting students' perspectives is a standard procedure for examining online participation (Hrastinski, 2008); therefore, the survey design was adapted from previous studies. Questionnaire items were selected from ten different research papers on factors influencing participation in EFL classrooms (Al-Qahtani, Elgzar, & Ibrahim, 2020; Alahmadi & Alraddadi, 2020; Beluce & Oliveira, 2015; Kulal & Nayak, 2020; Muthuprasad, Aiswarya, Aditya, & Jha, 2021; Susak, 2016; Van Wart et al., 2020; Wang & Guan, 2020; Zboun & Farrah, 2021). The survey design underwent four stages: literature review, item selection, categorization, and filtering. The final questionnaire had 37 items that were categorized thematically. Besides, the survey items used a 6-point Likert scale to measure agreement, ranging from 1 (Extremely agree) to 6 (Extremely disagree). The neutral option was omitted since it has no value in the result discussion.

3.2.2 Validity and Reliability

Regarding the instrument's validity and reliability, Fraenkel, Wallen, & Hyun (2015) emphasized the importance of ensuring that the study outcomes are correct, valid, appropriate, and meaningful. To address this issue the survey was reviewed by experts and associate professors in the field of education who provided valuable feedback on the structure and content of both the English and Arabic versions of the questionnaire. The suggested modifications were incorporated to minimize the risks of invalidity and unreliability. Additionally, a pilot test was conducted with nine participants from the same context as the study sample to ensure reliability. The reliability of the items was also assessed using Cronbach's Alpha test (Refer to Appendix A).

3.3 Ethical Considerations

The researcher obtained permission from the ELI Ethics Committee at KAU to conduct the research. The data was collected through an online survey which allowed easy access via various electronic devices (Fraenkel et al., 2015).

The electronic questionnaire was distributed to ELI-S female students through their instructors and social networking apps. The survey was made available to ELI-S students, and the participants' identities remained anonymous to encourage honest responses. Participation in the survey was voluntary, and completion of the survey indicated their consent to participate.

To ensure participants' clear understanding of the survey's purpose and items examples were provided to explain the meaning of participation (e.g., asking questions, answering, sharing ideas or thoughts, and using the microphone or chat box). Furthermore, the survey was translated into Arabic, and a translation expert in the field verified the accuracy and correctness of the translated items.

3.4 Data Analysis

The descriptive statistical analysis of the survey was conducted using the Statistical Package for Social Science (SPSS). Responses to each question in the survey were imported and coded into SPSS. Mean scores, standard deviations (SD), frequencies, and percentages were calculated for each survey item and section. Additionally, the Cronbach Alpha test was conducted to validate the whole result set of this study.

4. Results

To explore the factors influencing virtual classroom participation the ELI-S students were asked to rate their agreement to 25 items on a 6-point Likert scale. The significant findings of the descriptive data were reported under each table to ensure clarity of the result presentation, including percentage of responses.

4.1 Descriptive Data of the Questionnaire

Table 1. Teacher factor

Items	ED	D	SD	SA	A	EA
My teacher's skills and experiences in teaching virtual classes (using games and videos, interactive educational websites), helped encourage me to participate.	4.8%	3.6%	13.9%	24.2%	16.4%	37.0%
The teacher encourages discussion in the virtual classes.	9.7%	12.7%	17.0%	20.6%	18.2%	21.8%
The teacher's experience in teaching virtual classes was insufficient.	4.2%	5.5%	13.3%	21.8%	23.6%	31.5%
The teacher provides clear instructions on how to participate in the virtual course learning activities.	3.6%	6.7%	9.1%	17.0%	26.7%	37.0%
I participate more when the teacher encourages me to do more in the virtual classrooms.	10.9%	8.5%	18.2%	17.6%	17.6%	27.3%
I participate more when the teacher provides clear instructions on how to participate in course learning activities.	6.1%	3.0%	12.1%	18.8%	21.8%	38.2%

Note. ED=extremely disagree; D=disagree; SD= somewhat disagree; SA=somewhat agree; A=agree; EA=extremely agree.

The Teacher factor assessed the students' perceptions of their teachers' skills and experience in teaching virtual classes. Item 6 received the highest mean rating of 2.38 in the EA category and was selected by 38.2% of the respondents, thus confirming that clear instructions positively influenced student participation.

Table 2. VLE factor

Items	ED	D	SD	SA	A	EA
I participate less because I find it boring and difficult to study through virtual classes.	17.6%	18.2%	17.6%	10.3%	12.1%	24.2%
I participate less because I find it frustrating to do tasks online.	10.9%	13.3%	15.2%	18.8%	16.4%	25.5%
I participate less because I am not trained enough to learn through virtual learning platforms.	7.9%	11.5%	17.0%	18.8%	15.2%	29.7%
The level of my participation in the virtual classes is higher.	12.1%	17.6%	13.3%	23.6%	17.0%	16.4%
The level of my participation in regular classes (face to face) is higher.	26.1%	20.0%	16.4%	13.9%	11.5%	12.1%

The VLE factor explored students' perspectives on online learning. Item 1 received the highest percentage suggesting that most students found virtual classes challenging and less engaging.

Table 3. Grades factor

Items	ED	D	SD	SA	A	EA
I participate and comment during the debates and discussions because of my participation evaluation.	6.1%	3.6%	11.5%	20.6%	21.2%	37.0%
I would feel more encouraged to participate if the teacher evaluated me.	7.3%	5.5%	12.7%	15.8%	23.6%	35.2%

The Grades factor examined students' views on the impact of evaluation on their participation. Item 1 scored 37.0%, thus indicating that participation evaluation played a role in encouraging student engagement.

Table 4. Interactive class activities factor

Items	ED	D	SD	SA	A	EA
I think interactive educational activities, such as games (Kahoot), increase my willingness to participate.	3.6%	3.0%	18.2%	20.6%	19.4%	35.2%
Interactive educational websites and games encourage me to use the microphone and the chat box.	0.6%	8.5%	14.5%	22.4%	26.1%	27.9%

The Interactive class activities factor focused on the influence of interactive educational activities on student participation. Both items received similar percentage, thereby suggesting that interactive activities such as games and educational websites positively influenced students' willingness to participate.

Table 5. Internet factor

Items	ED	D	SD	SA	A	EA
I participate less because of the weak internet connection.	14.5%	11.5%	17.6%	29.7%	13.9%	12.7%
The weak internet connection reduced my willingness to use the microphone to participate in discussions.	15.8%	11.5%	16.4%	21.2%	17.6%	17.6%

The Internet factor examined the impact of Internet connectivity on student participation. Item 1 received 14.5%, thus confirming that unreliable internet connectivity negatively affected student engagement.

Table 6. Home environment factor

Items	ED	D	SD	SA	A	EA
The home environment (many disturbances from children and relatives) does not allow me to participate and concentrate on studies virtually.	10.3%	10.9%	9.7%	18.8%	21.2%	29.1%
Attending lectures from home reduced my willingness to participate.	19.4%	9.1%	19.4%	16.4%	12.1%	23.6%
I do not think that the home environment can be a stimulating learning environment to participate in and use the microphone or chat box.	26.1%	12.1%	21.2%	12.1%	13.9%	14.5%

This factor explored how the home environment affected student participation. Item 1 received the highest percentage 29.1%, suggesting that disturbances at home hindered student participation.

Table 7. Instructional support and feedback factor

Items	ED	D	SD	SA	A	EA
The teacher provides feedback in a timely fashion that encourages me to participate and ask for clarifications.	1.8%	8.5%	20.6%	23.0%	22.4%	23.6%
I participate more when the teacher uses a variety of techniques to communicate and teach virtually.	1.2%	4.2%	15.8%	24.2%	23.6%	30.9%

45.8% of the respondents agreed or strongly agreed that timely feedback and clarification from the teacher encouraged student participation. In comparison, 54.5% of the students agreed or strongly agreed that various communication and virtual teaching techniques enhanced participation. Overall, the findings highlighted the

importance of instructional support and feedback in promoting participation in VLE.

Table 8. COVID 19 social lockdown factor

Items	ED	D	SD	SA	A	EA
I have been feeling unencouraged to participate during this social distancing period.	17.0%	10.3%	15.8%	23.0%	20.0%	13.9%
The Covid 19 quarantine (the social lockdown) reduced my willingness to participate in the virtual classrooms.	18.2%	15.2%	18.8%	17.0%	17.0%	13.9%
The rapid change from regular classes (face-to-face) to virtual classes was the reason I did not feel encouraged to participate.	15.2%	11.5%	18.8%	16.4%	17.6%	20.6%

45.8% of the respondents agreed or strongly agreed that they felt encouraged to participate online. However, 48.1% agreed or strongly agreed that they felt less inclined to participate during the lockdown, and 38.2% agreed or strongly agreed that the rapid transition to online learning had decreased their willingness to participate. These findings indicated a negative perception of the impact of the lockdown, with a significant proportion of respondents expressing feeling discouraged and less enthusiastic.

4.2 Mean and SD of Each Factor Affecting Virtual Classroom Participation

The mean and standard deviation (SD) of each factor were calculated to determine which factor has a higher impact on the students' participation in VLE. The results for each factor were presented from the highest mean to the lowest, as shown in the table below.

Table 9. Mean and SD of each factor influencing VCP

The factors	Mean	SD
Virtual learning environment	16.76	5.790
Teacher	15.72	5.994
Learning environment at home	11.34	4.419
COVID 19 (the social lockdown)	10.27	4.457
Internet	6.79	2.979
Instructional support and feedback	5.16	2.172
Class activities	4.97	2.460
Grades	4.93	2.653

The study investigated factors influencing VCP and their respective means and SD. Among the factors, VLE achieved the highest mean, followed by teacher's role. The learning environment at home and the social lockdown due to COVID-19 were also significant factors. The internet and instructional support and feedback scored relatively lower means. Class activities and grades were found to have the lowest means among the factors influencing VCP. These results suggest that VLE and the teacher play prominent roles in determining VCP, while factors such as the learning environment at home, impact of COVID-19, internet access, instructional support, class activities, and grades also contributed to varying degrees.

5. Discussion

To provide answers to the research question, "What are the factors affecting classroom participation in KAU's ELI virtual learning classrooms?" the discussion presents the findings from the most important to the least important factor influencing virtual classroom participation from the students' perspective.

VLE—The virtual classroom setting significantly affected students' participation in the online classes, as indicated by the findings (Mean = 16.76; SD = 5.790). The results indicated that the online environment had the highest influence on students' engagement in virtual classrooms, which aligns with previous studies conducted by Al-Nofaie (2020), Alghamdi (2021), and Alahmadi and Alraddadi (2020). Furthermore, the survey revealed that VLE had a significant impact on the students' level of motivation. Some students perceived virtual classes as either too boring or too challenging, mostly due to the monotonous teaching style and lack of engaging activities and the lack of social interaction. These issues negatively affected the students' willingness to engage in the class discussions. This finding underscores the importance of incorporating more interactive and engaging elements into online instruction to make up for the lack of social interaction opportunities. To address the challenge of student

disengagement educators can leverage various strategies such as integrating games, videos, and interactive educational websites into virtual classes as suggested by Alahmadi and Alraddadi (2020). By creating an immersive and dynamic VLE, educators can enhance students' engagement and make online classes more stimulating and enjoyable.

Teacher's Role—The teacher's role emerged as an important aspect of student participation, with a mean score of 15.72. This finding aligns with the previous research conducted by Alshathri and Male (2020), which established the significant role of teachers in supporting student engagement. However, the current study provides a more nuanced perspective on this particular factor. While previous studies focused on instructional strategies and communication skills, this study revealed that students' perceptions of teacher-student interaction were central in promoting participation. The students responded positively to the teacher's stimulating teachings style, innovative and varied teaching methods, and effective communication. This highlights the importance of active engagement between instructors and students in the online classroom, supporting the recommendations put forth by Alghanmi and Nyazi (2020).

A key finding of our study is the substantial influence of teachers on student participation. Clear instructions provided by teachers on the intended course learning activities were strongly associated with increased student engagement. Students respond positively to learning activities whose aim, method, and purpose is clearly and sufficiently explained by their teacher. The Teacher factor assessed the students' perceptions of their teachers' skills and experience in teaching virtual classes. Item 6 received the highest mean rating of 2.38 in the EA category and was selected by 38.2% of the respondents, thus confirming that clear instructions positively influenced student participation. This finding aligns with previous research that emphasizes the critical role of teacher guidance in online settings, as highlighted in Alshathri and Male (2020). It underscores the importance of educators providing explicit instructions and guidelines so that students have a clear understanding of how to actively participate in the virtual classroom.

Home Learning Environment—The role of the learning environment at home revealed a mean score of 11.34 and thus emerged as a significant influence on student participation. This research finding is in line with the previous studies conducted by Almekhlafy (2020), Alghamdi and Yanbu (2021), and Basri et al. (2021) who highlighted the impact of the home environment on student engagement. However, the present study provides a deeper understanding of the specific challenges students face in their home settings, such as disruptions by other family members, distractions in the form of games and apps, and limited resources. This highlights the importance of recognizing and addressing these challenges to foster a supportive learning environment as suggested by Alghamdi and Yanbu (2021).

The home environment had a substantial impact on student participation in virtual learning. This finding underscores the importance of creating a conducive learning environment at home, which requires a suitable level of privacy and comfort, so that the students can focus on their instruction. The sudden shift from the organized and effective physical classroom environment to attending online classrooms from home required the students and their families to adapt quickly, and not all students had access to their own fully equipped and functional room for their studies. In addition, the families were forced to negotiate new daily routines and make the necessary adjustments to accommodate the needs of all their members. Educators can play a vital role by providing guidance to students and their families on strategies to minimize distractions and establish a dedicated space for learning. Collaboration with parents and caregivers becomes crucial in establishing routines and providing the necessary support for students to effectively engage in virtual classes, which was established by AlJhani et al. (2022) and Basri et al. (2021). When addressing the challenges of the home learning environment, educators can create an atmosphere that enhances student participation and facilitates optimal learning outcomes.

COVID-19 Social Lockdown—The COVID-19 social lockdown factor achieved a mean score of 10.27, emerging as a significant factor influencing student participation. This finding aligns with the previous research conducted by Miao et al. (2022), Al-Ghamdi et al. (2021), and Alfawaz et al. (2020) who emphasized the impact of the COVID-19 pandemic on student engagement. The sudden transition to remote learning as a result of the pandemic disrupted the accustomed learning environments, which underscores the need for educational institutions to provide adequate support and resources to mitigate its negative effects. School community life constitutes a highly significant factor in the social development of the students, and the face-to-face interactions cannot be offered in the virtual classroom.

The surveyed students perceived the impact of the social lockdown negatively, with a significant proportion of respondents expressing a lack of encouragement and reduced enthusiasm for participation. The challenges posed by the lockdown, such as limited social interactions and the absence of face-to-face learning experiences, may

have contributed to feelings of disengagement and social isolation.

Internet—The internet factor achieved a mean score of 6.79 and thus had a significant influence on student participation. This finding is consistent with previous studies conducted by Alfawaz et al. (2020), Alahmadi and Alraddadi (2020) and Alghamdi (2021), which acknowledged the impact of internet access on participation. However, this current research sheds light on the relative importance of the internet factor compared to the other observed factors. This study's findings suggest that ensuring reliable internet connectivity is necessary to enhance student participation in online classrooms. The sudden switch from the physical classroom to VLE caught some students unprepared, who lacked the necessary access to a stable internet connection and were unable to fully participate in the offered online instruction.

Reliable internet connectivity emerged as a critical factor that significantly influenced student participation in VLE. The surveyed students reported lower levels of participation when faced with weak or unreliable internet connections that were beyond their immediate control, yet affected their ability to access VLE and interact online. This finding underscores the presence of a digital divide and highlights the need for equitable access to high-speed internet for all students. Educational institutions and policymakers should prioritize efforts to bridge this divide by providing the necessary infrastructure and resources to students who lack reliable internet connectivity.

Interaction, Support, and Feedback—The factors of interaction, support, and feedback achieved a mean score of 5.16 and were identified as significant influences on student participation. This finding aligns with previous research conducted by Alahmadi and Alraddadi (2020) and Ahmed et al. (2021), which highlighted the role of interaction and feedback in promoting student engagement. However, the current study provides a unique perspective by focusing on the specific types of interaction and feedback that students perceived as conducive to their classroom engagement. This information can serve as a valuable guide for instructors in designing meaningful and interactive online learning experiences.

The findings underscore the importance of instructional support and feedback in fostering student participation in VLE. The surveyed students valued interactions with instructors and peers that are meaningful, collaborative, and facilitate active learning. Moreover, they appreciated timely and constructive feedback that helps them to gauge their progress and make improvements.

Interactive Class Activities—The class activities factor achieved a mean score of 4.97and showed a relatively low impact on student participation, which stands in contrast to the previous research conducted by AlHuthayfi (2023), Aljuaid (2021), and Oraif and Elyas (2021). However, the current study focuses on student participation in online classrooms, and their specific nature may influence the significance of class activities. Further research is needed to explore this relationship in more depth and understand the specific dynamics of class activities in virtual settings.

The survey findings highlight the positive impact of interactive class activities on student participation in VLE. The interactive class activities factor focused on the influence of interactive educational activities on student participation. Both items received similar mean ratings (2.45 and 2.52), thus suggesting that interactive activities such as games and educational websites positively influenced students' willingness to participate.

Incorporating elements such as games, videos, and interactive educational websites into virtual instruction can generate excitement and foster student involvement. These activities offer opportunities for active learning, peer collaboration, and the application of knowledge (AlHuthayfi, 2023). By integrating interactive elements into virtual classes educators can create a dynamic learning environment that promotes student engagement and participation. Therefore, effective online learning requires a variety of content and activity formats since the delivery of the learning content is limited to the screen. Interactive classroom activities are particularly important in VLE so as to create multiple channels of communication where students can cooperate and share and exchange their ideas to bridge the physical gap between them.

Grades and Evaluation—The grades and evaluation factor played a significant role in the current study. Despite being initially perceived as the least influential factor, grades emerged as an important factor identified by the students, which encourages participation, based on the qualitative data. This finding contradicts the previous literature that has identified intrinsic motivation and engagement as critical drivers of participation. Some studies indicated potential negative effects of grades and evaluations on student motivation and engagement in the virtual learning context, as mentioned by AlJhani et al. (2022) and Al-Awaid (2022). Nevertheless, the current study supports the potential role of grading as an extrinsic motivator, this aligning with the findings of Al-Awaid (2022) and AlHuthayfi (2023). This suggests that instructors can leverage assessments and grading systems to incentivize student participation.

Another noteworthy finding of the current study is the impact of evaluation on student participation. Students reported higher levels of engagement during debates and discussions when their participation was evaluated. This finding aligns with motivation theory which emphasizes the role of extrinsic rewards in driving engagement (Deci & Ryan, 1985). Educators can capitalize on this insight by incorporating participation evaluation as part of the grading criteria, thereby incentivizing active student involvement in virtual classrooms. However, it is crucial to strike a balance between extrinsic and intrinsic motivation to foster genuine interest and engagement in learning as highlighted by Ryan and Deci (2000).

These findings regarding the impact of grading and evaluation on virtual participation, which significantly departs from the previous results reported in the literature. While most studies argued that grading acts as the most demotivating factor, the results of this study suggested that the grading factor in fact encourages students' participation in the virtual classroom. This noted discrepancy between the role of grading and evaluation as reported in the literature and observed in this study underscores the need for further research and investigation into the relationship between grades, evaluation, and student participation in online learning environments. By considering these factors and striking a balance between extrinsic and intrinsic motivation, educators can enhance their approaches to foster genuine interest and engagement among students in virtual classrooms.

Virtual classrooms, when effectively utilized, can promote student engagement, interaction, and access to resources. Nevertheless, it is essential to acknowledge the limitations of online learning and the potential disparities in students' access to technology and internet connectivity. Future studies should assess the long-term impact of the pandemic on language learning outcomes and address the specific needs of language learners in the Saudi Arabian context.

6. Conclusion

The quantitative analysis uncovered several key factors that influenced student participation. First, the virtual environment plays a significant role due to usability of the online learning platform, availability and accessibility of digital resources, and overall design and functionality. Second, there is the important role of teacher-related factors due to quality of instruction, effective communication and engagement, and support and guidance. Additionally, the home learning environment included aspects such as availability of a quiet study space, access to necessary technology, and parental support.

Social distancing also affected students' motivation and ability to engage in virtual learning. Internet connectivity emerged as a critical factor, in addition to teacher and peer interaction, support, and feedback, and interactive activities.

6.1 Implications and Recommendations

Teachers, policymakers, and curriculum designers can encourage participation in VLE when considering that students respond positively to cooperative, supportive, and receptive teachers who can benefit from using interactive learning methods and online learning tools. Further, students prefer graded activities and a variety of classroom activities in VLE and their participation should be included in the overall score.

Meanwhile, institutions can benefit from providing comprehensive and continuous professional development opportunities, so that teachers can create engaging and interactive online classrooms, implement graded activities and offer a diverse range of online activities. Training sessions can focus on assessment techniques, activity design principles, and integrating educational technology tools to enhance the online learning experience. Institutions should regularly update their technological infrastructure and facilitate open communication channels between students and teachers and regular feedback mechanisms.

6.2 Limitations of Study

Not all the factors influencing student participation in English VLE were considered in this study. Moreover, due to the lack of time and sources, only the perspectives of ELI-Science students at KAU were considered, not including ELI-Art track students or the teachers' perspectives.

6.3 Recommendations for Further Research

Further research can collect the students' perceptions from other universities in Saudi Arabia to enhance the study's external validity. The mixed experiences of student participation in online classrooms can be explored in the long term, and future studies can investigate the factors contributing to students' positive and negative engagement, assess the impact of implementing the students' suggestions and compare the teachers' and the students' perceptions. In addition, semi-structured interviews can be conducted and the number of classroom observations increased while focusing on a non-native English-speaking context to compare the findings.

Competing interests

The authors declare that they have no financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

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

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

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

Data sharing statement

No additional data are available.

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Appendix A. Reliability Statistics: Cronbach's Alpha of the Questionnaire Items

The factors	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N. of Items
Teacher	.745	.752	6
Virtual learning environment	.708	.703	5
Grades	.695	.695	2
Class activities	.799	.800	2
Internet	.821	.823	2
Learning environment at home	.792	.792	3
Instructional support and feedback	.750	.752	2
COVID 19 (the social lockdown)	.859	.859	3

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