Original Article

Analyzing the English for Specific Purposes (ESP) Students' Perceptions & Challenges Towards the Use of Digital Learning Platforms in Speaking Class

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Abstract: This study aims to analyze the ESP students' perceptions and challenges toward using digital learning platforms in their speaking classes. The research design employed is a mixed method. The participants are 130 international ESP students in one of the private universities in Malang. The instrument is a close-ended questionnaire with 6 open-ended questions distributed via Google Forms. In analyzing the data collected, a descriptive statistical analysis was used for the close-ended questions and a thematic analysis for the open-ended questions. The findings show that the digital learning platforms Zoom, Canvas, and WhatsApp had positive perceptions from most participants. It has high percentages on language learning potential, meaning focus and authenticity of CALL evaluation criteria. WhatsApp got the most perception among them. Moreover, the challenges encountered by the participants are technical, material, and interaction problems. To sum up, ESP students perceived those three digital learning platforms in their speaking class positively despite the challenges they faced when using them. This finding could be a consideration for ESP practitioners and students when choosing the appropriate digital learning platform for their students. Moreover, a variation in instruments and analyzing different skills could gain deeper insight into this issue.

Keywords: English for Specific Purposes; Perceptions; Digital learning platforms; Speaking

1. Introduction

The rapid development of technology impacts most human aspects, including the teaching and learning method. Today's teachers have new challenges in integrating technology into their classes. The teachers need to be more innovative and creative in their classes. According to Mulyadi et al. (2020), language teachers should easily integrate technology into their lessons. Many digital learning platforms have emerged due to technological improvements, which are expected in this day and age. Teachers should use such platforms in their classes for the teaching and learning process to be successful. There have been changes in tertiary education because of the emergence of digital learning platforms. Numerous academic institutions are transitioning from conventional learning to wholly online or blended learning using technology. ELT teachers have been utilizing various digital learning platforms in their classes since the early 1960s when the audio-lingual technique was introduced, and until now, when the internet connection is available

everywhere. Innayati (2022) claims that social media has been utilized in classrooms in this way. It can teach English language proficiency, content classes like English for Specific Purposes (ESP), and cultural aspects of English in the classroom.

Additionally, an investigation into computer-assisted language learning (CALL) was carried out by Chapelle et al. (2013). They created a set of standards for evaluating computer software programs or applications that are utilized in language instruction. In the 2000s, language teachers often made language learning easier for their pupils. They created more visually appealing and engaging learning sessions by incorporating digital devices, software, and online resources into the classroom. Moreover, learners have time and space flexibility with e-learning, especially when using such media on mobile devices (Warni et al., 2018). It is easier for teachers and students to provide feedback, improving communication effectiveness and efficiency. The students can obtain opinions and responses more rapidly since social networking platforms are easier to reach. Even though technology has been used extensively to support teaching in higher education, there are differences in the readiness of teachers, students, and institutions to handle this situation. The preferences of EFL students for using digital platforms during emergency remote instruction were examined by Amin and Sundari (2020). Their research revealed that face-to-face instruction is more desirable than the online digital learning method they used during ERT.

Conversely, Grabar (2020) demonstrated a highly favorable attitude toward students using digital learning platforms. Furthermore, in terms of using digital devices for language learning, a study by Lam et al. (2018) on EFL students' argumentative writing discovered that using Edmodo discussion enhanced their skills. This finding indicates that digital technologies can be a good option for media in the EFL teaching-learning process as long as they are used responsibly. Some studies have shown that digital platforms can improve teaching-learning activities in English for Specific Purposes (ESP). Alkehzzi & Al-Dousari (2016) said that using mobile phone applications in teaching foreign languages is beneficial and influences learners' comprehension of vocabulary and grammar. In a similar direction, Waicekawsky and Laurenti (2020) investigated the teaching of ESP during the Covid-19 pandemic. The result indicated that time flexibility in LMS is the biggest factor in students' perception. The students' sentiments toward the course and the LMS were positive, as seen by the outcomes. Furthermore, few studies in the Indonesian ESP context have been done to determine students' perspectives and challenges towards using digital learning platforms in ESP classes in specific skills (Ahmad et al., 2020; Jankovic & Tanasijevic, 2022; Warni et al., 2018; Keshtiarast et al., 2022; Penalver et al., 2021). Most researchers focus on the students' perspectives only in general ESP classes. Therefore, this study tries to analyze the ESP students' perceptions and challenges towards using digital learning platforms such as video conferences, learning management systems (LMS), and messenger applications in ESP speaking classes.

2. Literature Review

Many digital platforms can be used in ESP classes. One of them is a video conference. It is a technology that allows users to meet virtually from different locations as long as it has an internet connection (Kagan, 2019). There are great applications for video conferences. Guzacheva (2020) revealed that Zoom is a significant application for online English learning. This tool is completed with a video-audio feature and numerous features to encourage greater involvement on desktop or mobile devices. Through Zoom, the students are allowed to interact not only with the teachers but also with their peers. It also has a chatbox feature that can be used for written form communication. Next, this tool has screen share, whiteboard, and raise hand features. It makes the class conducted through this tool feel like a face-to-face class. Canvas is a learning management system created by Instructure Inc. in 2008. It offers various features that both teachers and students can use. It allows the teachers to upload materials in various forms, set up assignments and quizzes, make announcements, comment on the students' tasks and even help manage students' grades. For the students, this LMS helps them access course materials easily, see the teachers' or peers' comments and see their progress and grades in the course.

Moreover, some ELT teachers have already used Canvas. Cho et al. (2023) showed that some Canvas' features are useful for the students in their writing class. In addition, a study of 100 EFL learners in Vietnam by Cam (2021) revealed that e-learning through Canvas effectively encourages them to speak English and is enjoyable. WhatsApp is a mobile application that allows users to communicate with each other through voice and text. It can also be a tool for sending photos, links, documents and notes. In Indonesia, WhatsApp is the top social media used in the last quartal of 2023; most users are Generation Z (Wolff, 2024). Many studies have shown the advantages of this application in English language teaching. WhatsApp for the students impacted their attitude during the class. (Kheryadi, 2018). Since the students can actively interact using their preferred language and have enthusiasm for communicating using English. Moreover, WhatsApp is relatively easy to use and can motivate, attract, and make students active in the class (Palupi et al., 2023).

3. Materials and Methods

Since this research aims to investigate the ESP students' perceptions and challenges toward using digital learning platforms in speaking class, the research design employed is the mixed method. The location of this study is in

Universitas Muhammadiyah Malang (UMM). The ESP program is compulsory, especially for all their first-year students and offered in their first and second semester. To choose the target population, the writer chose the departments that have international classes. Specifically, this study employed simple random sampling. The sample of this study is 192 first-year students who belong to international classes in 5 different departments. In order to get the minimum sample, the Slovin formula is used with a significance level 5% and the result is 130 students. The instrument that is employed in this research is a questionnaire. It consists of a close-ended questionnaire and an open-ended questionnaire. This questionnaire consists of 3 parts with the preliminary part of the survey is the demographic data of the respondents. The next part of the questionnaire is adapted from Amin & Sundari (2020). It was constructed based on the CALL evaluation criteria that Jamieson et al. (2013) discovered.

The questionnaire uses a Likert scale with 3 and 4 choice options. Then, 6 open-ended questions are designed to gain more information about the challenges faced by ESP students in using the digital platforms. It is administered to all study samples and is available online via Google Forms. After the data has been collected, the researcher reads through the questionnaire responses. Each response was coded into numbers with a value of Likert scale ranges. Subsequently, the questionnaire scores were input into the tables and the descriptive statistical analysis was used to calculate it. The calculation includes the respondents' percentage on answering each item of the questionnaires. For the open-ended questions data, thematic analysis was employed for finding the themes. Therefore, the responses were read several times, transcribed, and categorised into themes. Sub-themes were then classified based on the codes assigned to the themes. Last, both the data from the closed-ended and open-ended questionnaire were interpreted.

4. Results and Discussion

This research aims to identify the ESP students' perceptions of using digital learning platforms in ESP speaking classes at the University of Muhammadiyah Malang. The data were discussed in the six Computer Assisted Language Learning criteria developed by Jamieson et al. (2013) upon the open-ended questions among the three platforms with the related theories and previous studies.

Table 1. ESP Students' Perceptions on Zoom

Statements	Yes, very much %	Somewhat %	Not at all %
I am able to learn the ESP speaking materials through this platform.	38	56	6
I am able to understand the ESP speaking materials through this platform.	38	56	6
I am able to do the ESP speaking exercises through this platform.	42	52	6
Meaning Focus			
The directions and instruction given in this tool are easy to follow.	63	37	0
The meaning materials given in this tool are understandable.	52	45	2
By using this tool, I can learn more about the ESP speaking materials.	28	63	9
Learner Fit			

Statements	Strongly Agree %	Agree %	Natural %	Disagree %	Strongly Disagree %
My learning style suits with this platform	46	30	13	10	1
My age suits with this platform.	28	27	31	9	5
My learning preferences suits with this platform.	18	30	42	8	2
My speaking skill improves with this platform.	39	34	17	9	1
Authenticity					
The content of this platform is what I need for learning speaking.	29	40	16	10	2
The language used on this platform is like what used in real-life communication.	36	34	19	12	1

Statements	SA	A	N	D	SD
Positive Impact					
I like learning using this platform.	35	28	23	13	1
I fancy this platform to a conventional class.	23	16	16	34	11
I will recommend my colleagues for using this platform.	27	39	17	15	1
I will use this platform for other classes/ courses.	19	31	38	12	3
Practicality					
This platform's features are quite simple to use.	39	29	19	11	2
I am able to operate this platform by myself.	30	24	26	11	2

Note: Language Learning Potential; SA (Strongly Agree); A (Agree); N (Neutral); D (Disagree); SD (Strongly Disagree)

Table 1 captures the results of ESP students' perceptions of Zoom. The first criterion is language learning potential. As Jamieson et al. (2013) stated, this criterion describes the level of potential emphasis a positive form focused. The findings show that Zoom scored highest on language learning potential criteria. This web-conference application can be used in the ESP speaking class. As in line with Guzacheva (2020) revealed that Zoom, is a significant application to use on English online learning, particularly in speaking classes. Regarding the participants' ability to understand the meaning of the speaking materials through the platforms. The finding is that Zoom helped the learners understand the meaning of the materials. Using this video conference platform creates a virtual interaction between the teachers and students. Abubakar & Tsuraya (2021) said that the students highly perceive the contact between peers, lecturers, and students, and this platform might help them.

Further, Zoom could be the best choice for helping the students comprehend the ESP speaking materials. By using this video conference, the lecturers and students could meet virtually. This could help the students understand more since they can ask or share directly on this platform with the teacher if they have any questions or problems. Next, Zoom got positive perceptions because it fits the learners' learning style and can improve their speaking skills. Khoiriyah (2023) explains that the most preferred method is conducting a speaking class through Zoom. The existence of high interaction between the lecturers - students and the variation in the class activities supported this result. Also, some previous studies proved that Zoom could improve students' speaking scores and satisfaction (Dharmawati, 2023).

Next, Zoom got a positive agreement on the platform: use language like in real-life communication. Khoiriyah (2023) mentioned that learning to speak through Zoom helps the students to understand the material better. Using Zoom, the lecturer could show the contents and provide students with a direct explanation. Therefore, the students feel like they communicate with the lecturers in real life. Additionally, when there is an error in pronunciation, the teacher could help fix it. This makes the students more aware of their mistakes and helps them use them correctly in daily communication. The fifth criterion is the positive effects of CALL programs on users and called with positive impact. Zoom perceived the positive result on those four statements. The learners enjoyed using this video conference application. As Anwar et al. (2023) stated, learning ESP speaking on Zoom is fun and enjoyable. The speaking activities can be carried out in various forms, so it is not boring for the students during the online meeting. While in the criteria of practicality, Zoom showed it could be beneficial in speaking classes since this software is user-friendly and equipped with teaching features like a whiteboard, raise hand and share screen (Tsuraya, 2021).

Table 2. ESP Students' Perceptions on Canvas

Statements	Yes, very much %	Somewhat %	Not at all %
I am able to learn the ESP speaking materials through this platform.	32	58	10
I am able to understand the ESP speaking materials through this platform.	26	67	7
I am able to do the ESP speaking exercises through this platform.	41	52	7
Meaning Focus			
The directions and instruction given in this tool are easy to follow.	48	48	4
The meaning materials given in this tool are understandable.	38	58	4

By using this tool, I can learn more about the ESP speaking materials.	44	52		12	

Learner Fit

Statements	Strongly Agree %	Agree %	Natural %	Disagree %	Strongly Disagree %
My learning style suits with this platform	41	25	12	15	7
My age suits with this platform.	32	25	29	9	5
My learning preferences suits with this platform.	15	32	37	11	5
My speaking skill improves with this platform.	34	36	12	15	3
Authenticity					
The content of this platform is what I need for learning speaking.	23	49	15	13	3
The language used on this platform is like what used in real-life communication.	38	30	14	13	3
Positive Impact					
I like learning using this platform.	14	33	34	14	5
I fancy this platform to a conventional class.	13	20	18	38	11
I will recommend my colleagues for using this platform.	14	28	13	41	4
I will use this platform for other classes/ courses.	14	35	33	13	5
Practicality					
This platform's features are quite simple to use.	19	25	38	14	4
I am able to operate this platform by myself.	21	28	15	32	4

Note: Language Learning Potential; SA (Strongly Agree); A (Agree); N (Neutral); D (Disagree); SD (Strongly Disagree)

Table 2 shows the results of this study on Canvas. As the learning management system used in the ESP speaking class at this private university, Canvas had the highest position in the authenticity criterion. This LMS was chosen as the platform to provide content based on the students' needs. This result is supported by Virginiya (2023), who argued that Canvas helps students learn English effectively with its features. By accessing Canvas, the students could still get the materials to practice their speaking and quizzes as they experienced in a face-to-face class setting. Besides, Canvas has more beneficial features than WhatsApp and Zoom. For example, in Canvas, there is a reminder notification feature on the students' accounts so they will not miss assignments. Besides, Canvas gained positive agreement on the last statement regarding the meaning of focus. This finding is supported by Salam (2020), who states that the students can review the materials after the class ends. This learning management system (LMS) is also beneficial in arranging their learning materials. Subandoro & Sulindra (2019) reveal that this learning management system can assist students in organizing their learning resources and facilitating online learning.

On the criterion of learner fit, Canvas got the lowest score. This finding is in line with Virginiya (2023). In her study, she revealed that Canvas was unpopular among the students and did not match their learning style. Also, this LMS got the lowest score on the positive impact and practicality criteria. The respondent said they still prefer the other platform for their online speaking class. This is contradicted by Cham (2021), who states that e-learning through Canvas effectively arouses them to speak English and is enjoyable. It might have happened since Canvas has no feature for giving oral feedback needed in speaking class. Hence, this LMS is not the students' preferences for speaking class. Lastly, it was found that this LMS is not practical. The students could not operate this LMS by themselves at first time, as in line with Choe et al. (2023), which argued that some training on using Canvas for the students were needed. Since some of its features are not easy to operate, the students were not popular with this LMS.

Table 3. ESP Students' Perceptions on WhatsApp

Statements	Yes, very much %	Somewhat %	Not at all %
I am able to learn the ESP speaking materials through this platform.	40	54	6

Statements			
I am able to understand the ESP speaking materials through this platform.	32	65	4
I am able to do the ESP speaking exercises through this platform.	52	48	0
Meaning Focus			
The directions and instruction given in this tool are easy to follow.	67	33	0
The meaning materials given in this tool are understandable.	45	53	2
By using this tool, I can learn more about the ESP speaking materials.	37	51	5
Learner Fit			

Statements	Strongly Agree %	Agree %	Natural %	Disagree %	Strongly Disagree %
My learning style suits with this platform	37	30	15	16	2
My age suits with this platform.	34	25	28	8	5
My learning preferences suits with this platform.	38	31	19	11	1
My speaking skill improves with this platform.	31	38	16	14	1
Authenticity					
The content of this platform is what I need for learning speaking.	28	42	16	14	0
The language used on this platform is like what used in real-life communication.	36	30	22	12	0
Positive Impact					
I like learning using this platform.	16	38	32	12	2
I fancy this platform to a conventional class.	14	22	38	17	9
I will recommend my colleagues for using this platform.	16	24	45	11	4
I will use this platform for other classes/ courses.	29	18	35	12	3
Practicality					
This platform's features are quite simple to use.	45	25	19	12	3
I am able to operate this platform by myself.	39	21	28	7	5

Note: Language Learning Potential; SA (Strongly Agree); A (Agree); N (Neutral); D (Disagree); SD (Strongly Disagree)

Table 3 captures the ESP students' perceptions on WhatsApp. This study revealed that the percentage of participants who chose WhatsApp is higher than that of the other two platforms. On the first statement in this criterion, the ability to learn the ESP speaking materials through the digital learning platforms, WhatsApp got the most positive agreement. It indicates that the learning process delivered via this application could help the participants learn the materials. This result aligns with Palupi et al.'s (2023) investigation on ESP students' perceptions on the implementation of WhatsApp as a learning platform. It implies that this application is worth using in ESP speaking class as one of the online learning tools. WhatsApp is appropriate for delivering the material since the teachers could record his/ her voice or share material's recording and share it to the student through this application. It is also supported by Amin and Sundari (2020), who claimed that this application has gained high preferences in material delivery. Moreover, this messaging application also gained a high percentage as the platform for doing the speaking exercise. This is in line with the research' result from Palupi et al. (2023) which stated that WhatsApp is the easiest application for submitting tasks.

The meaning focus criterion investigates how much a learner's attention is focused on the language's meaning. The result showed that most of the participants agreed to WhatsApp. A similar result from Jasrial (2017) is that the teachers' instructions in WhatsApp groups can be read more than once and helpful for the students. The findings also show that WhatsApp fits the participants' age and learning preferences. Palupi et al. (2023) state that WhatsApp matches the students' learning preferences. Also, since most participants are Gen Z, this messaging application suits their age. The last criterion in CALL evaluation by Jamieson et al. (2013) is practicality. This study found that WhatsApp is the easiest application to operate. WhatsApp is already familiar among these participants. Thus, the learners do not face many obstacles when the ESP speaking class is conducted through this messaging application. They can easily

use the application features usually used in speaking class like voice notes and submitting task in the form of video or voice recording (Palupi et al., 2023).

Table 4. Summary Score of The ESP Students' Perceptions

No	Criteria	Digital Learning Platforms		
		Zoom %	Canvas %	WhatsApp %
1.	Language Learning Potential	94	92	97
2.	Meaning Focus	96	96	95
3.	Learner Fit	63	60	66
4.	Authenticity	68	71	68
5.	Positive Impact	54	43	44
6.	Practicality	61	46	63

All in all, most of the participants on this current study agreed that those three digital learning platforms are beneficial in their ESP speaking class. As seen on the summary score table (see Table 4), those three digital learning platforms gained positive perceptions in almost all CALL criteria. WhatsApp takes the first place regarding language learning potential, learner fit, and practicality. These findings might seem to derive from the fact that they are primarily members of Generation Z, which is defined as those between the ages of 18 and 25 (Poláková & Klímová, 2019). Young people nowadays are digital natives; they have never known a world without the internet. Therefore, they have grown acclimated to multimedia technology advancements like social media, cellphones, and tablets (Turner, 2019). Since they depend on technology daily, students often have a positive attitude about using digital platforms and applications (Alberth, 2023).

While in the meaning focus criterion, Zoom and Canvas showed the same percentage in promoting the students' speaking skills. This finding is consistent with Tsuraya (2021) that materials provided in video conference applications and LMS are learnable and easy to follow. On the criterion of authenticity, Canvas gained the most positive perception among others. It indicates that the content materials arranged, and language used on this LMS meet the students' needs. Virginiya (2023) stated in her study that Canvas allows students to access the course content effectively and directly. The last, lowest percentage is shown on the positive impact criterion for all three digital learning platforms. This appears to improve the ESP students' speaking skills, and not only relying on these platforms but also face-to-face classes are still needed. As per Kulal & Nayak (2020), the students are comfortable with these platforms in their speaking classes. However, they do not believe that virtual learning in speaking can boost their speaking skill like in conventional classrooms.

Table 5. ESP Students' challenges

Challenges Category	Students' Responses
Technical Problems	R1: My problem was the worst internet connection, so I got lost from what my teacher said.
	R2: No good internet connection makes online learning suffer a lot.
	R3: Sometimes the internet connection causes frustration.
	R4: Slow internet connection and I prefer face to face class because everything is clear.
Material unclarity and difficulty	R5: I can't understand materials very well, everything is unclear.
	R6: Everything is unclear in the online class, so I had a miscommunication with my teacher causing my relationship to be the worst at that time.
	R7: I had so many distractions so I can't focus.
	R8: Less interaction with my teacher, I can't totally focus and get lost.
Lack of Interaction	R9: I felt so shy when I should speak in front of my friends in zoom. Also, I don't get enough corrections from my teacher.
	R10: I don't like poor classroom interaction in online classes.
	R11: I am very shy to ask a question.
	R 12: Online class has a lazy atmosphere, sometimes so sleepy and my teacher wouldn't know what I was doing. No punishment for those who are off cam.

Note: R refers to the respondent.

The challenges were confirmed by Rahmawati & Sujono (2021) that Indonesia is facing poor technological infrastructure, so online learning failed to run smoothly. This issue impacted on the students' ability to understand the

materials. In terms of flexibility, Karnalim & Wijanto (2021) confirmed that the online platform provides flexibility. However, they suggested applying gamification to battle the lazy and boring classroom atmosphere in ESP speaking. Also, the limited interaction among the students and teachers becomes a challenge in this study. Palupi et al. (2023) said that few students could have problems dealing with loss of focus cause the ignorance from the teacher.

5. Conclusions

This study concludes whether Zoom, Canvas, and WhatsApp had positive perceptions from most participants. Approximately 48% - 65% of the students agreed that those platforms they used were helpful and had the potential to be used in ESP speaking class. For Zoom, it scored between 54% to 96% for all six criteria. It gained the most results on the meaning focus criterion. It shows that Zoom could be an appropriate digital learning platform for helping students understand and learn the meaning of ESP speaking material. Also, it is suitable for giving clear instructions and directions to the students. This video conference gained the lowest percentage of positive impact. It demonstrates how the students thought Zoom assisted them in learning to communicate in English, which improved their speaking abilities. Canvas achieved 43% - 96% on all six criteria: the highest on meaning focus and the lowest on positive impact. Moreover, this LMS gained the highest score on authenticity compared to the others. This indicates that although Canvas has good promise as a medium for language learning, students may be reluctant to use it in subsequent courses. Hence, WhatsApp had a more positive perception of the three out of six criteria. This messaging application got 97% in language learning potential, 66% on learner fit and 63% on practicality.

This research found some of its constraints regarding the challenges the ESP students encounter towards using the digital learning platforms in their speaking classes. Most of the participants said that technology infrastructure problems are the main barrier. Slow and unstable internet connections are one of the big issues when joining online classes. Material unclarity and lack of interaction also become obstacles to this issue. Several recommendations are offered considering the investigation's results. The first piece of advice is for ESP students. Many options are available for improving speaking skills. One of them is online learning utilizing digital learning platforms. The students can choose based on their needs, learning style, and flexibility. For ESP, lecturers or teachers must choose the platform carefully, particularly for the speaking class that needs a lot of interaction among the lecturers and students. The lecturers can use CALL criteria when selecting the digital learning platforms for their speaking classes.

Also, they can provide the platforms with more attractive and fun activities such as gamification. Future researchers may complete their study with other instruments for a more comprehensive result. Future researchers may complete their study with other instruments to get more comprehensive results on the issue. A deeper study of teachers' or lecturers' perceptions of and challenges using digital learning platforms is highly recommended. Also, future researchers could investigate this issue in different ESP skills, such as listening and receptive skills like reading or writing.

References

Abubakar, M., & Tsuraya, A. (2021). Investigating Students' Eyesights in the Utilization of Platforms in Learning ESP During the Covid-19 Pandemic. *Seltics Journal: Scope of English Language Teaching Literature and Linguistics*, *4*(1), 1-16.

Ahmed, S. T. S. (2019). Chat and Learn: Effectiveness of Using WhatsApp as a Pedagogical Tool to Enhance EFL Learners Reading and Writing Skills. *International Journal of English Language and Literature Studies,* 8(2), 61–68.

Amin, F. M., & Sundari, H. (2020). EFL Students' Preferences on Digital Platforms During Emergency Remote Teaching: Video Conference, LMS, or Messenger Application? *Studies in English Language and Education, 7(2), 362-378.*

Archambault, L., Wetzel, K., Foulger, T. S., & Williams, M. K. (2016). Professional development 2.0. *Journal of Digital Learning in Teacher Education*, *2974*(April), 2153–2974.

Barhoumi, C. (2020). The effectiveness of WhatsApp Mobile learning activities guided by activity theory on students' knowledge management. *Contemporary Educational Technology*, *6*(3), 221-238.

Cam, Lien. (2021). The Application of E-learning in English Teaching at Dong Nai Technology University. *International Journal of Progressive Sciences and Technologies, 25(1)*, 544.

Chapelle, C. A. (2001). Computer applications in second language acquisition. Cambridge University Press.

Cho, Y., Richards, A., & Jones, S. (2023). The use of CANVAS LMS in remote academic EFL writing classes: Its benefits and limitations. *Korean Journal of General Education, 17(4)*, 103-124.

Dharmawati, Dharmawati. (2022). The Use of Zoom Application as Teaching Media To Improve Students Speaking Skill. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature, 10 (22),* 1933-1940.

Guzacheva. (2020). Zoom technology as an effective tool for distance learning. *Bulletin of Science and Practice, 6(5)*, 457–460.

Hamidah, N. F., & Prystiananta, N., C. (2022). Zoom Cloud Meeting: Teaching Media in Esp Online Learning. *Linguistic, English Education and Art (LEEA),* 5 (2), 175-182.

Handayani, A. D., Cahyono, B. Y., & Widiati, U. (2018). The Use of Instagram in the Teaching of EFL Writing: Effect on Writing Ability and Students' Perspectives. *Studies in English Language Teaching*, *6*(2), 112.

Hartono, H., Widiyati, E., & Anwar, C. (2023). Group Work in Zoom Breakout Rooms to Enhance English-Speaking Self-efficacy for Active Learning Activities. *Studies in English Language and Education, 10*(1), 137-154.

Jamieson, J., Chapelle, C., & Preiss, S. (2013). CALL evaluation by developers, a teacher, and students. *CALICO Journal*, *23*(1), 93-138.

Jasrial, D. (2017). Utilizing Whatsapp Application for Teaching English Language: Why and How? *Isbn: 978-602-70378-2-3.*

Kagan, J. (2019). *Video Conferencing.* https://www.investopedia.com/terms/v/video-conferencing.asp

Kasami, N. (2021). Students' Perceptions of Digital Storytelling in Primarily Asynchronous EFL Classes at A Japanese University. *CALL in a climate of change: adapting to turbulent global conditions – short papers from EUROCALL 2017* (pp. 177-183).

Khoiriyah, Khoiriyah. (2023). Students' Preference of Speaking Activities in Online ESP Classes. *Al-Ishlah: Jurnal Pendidikan*, 15 (2), 1310-1320.

Kirovska-Simjanoska, D. (2019). Digital vs in-Person Learning Environment in ESP Classrooms: Let the Students Decide. *SEEU Review*, *14*(1), 36–68.

Kulal, A., & Nayak, A. (2020). Astudy on Perception of Teachers and Students Toward Online Classes in Dakshina Kannada and Udupi District. *Asian Association of Open Universities Journal, 15(30)*, 285-296.

Latief, M., A. 2016. *Research Methods on Language Learning an Introduction 2nd Ed*. Malang: Universitas Negeri Malang.

Lam, Y. W., Hew, K. F., & Chiu, K. F. (2018). Improving Argumentative Writing: Effects of A Blended Learning Approach and Gamification. *Language Learning & Technology*, 22(1), 97–118.

Lee, J. S. (2019). Informal digital learning of English and second language vocabulary outcomes: Can quantity conquer quality? *British Journal of Educational Technology,* 50(2), 767–778

Mulyadi, Dodi, et .al (2020). Blended Learning in English for Specific Purposes (ESP) Instruction: Lecturers' Perspectives. *Computer-Assisted Language Learning Electronic Journal, 21*(2), 204-219

Nugroho, A. & Atmojo, A. E. P. (2020). Digital learning of English beyond classroom: EFL learners' perspective and teaching activities. *Journal of English Education and Linguistics Studies,* 7(2), 219-243.

Nugroho, A. & Rahmawati, A. (2020). "Let's Write a Caption!": Utilizing Instagram to Enhance ESP Students' Writing Skills". *Jurnal BASIS,* 7(1), 1-12.

Palupi, D., Bahari, J. L. N., & Wulandari, R. M. (2023). ESP Students' Perceptions on the Use of Whatsapp Application as a Learning Tool. *Riwayat: Educational Journal of History and Humanities*, 6 (2), 2023, 359-366

Poláková, P., & Klímová, B. (2019). Mobile technology and Generation Z in the English language classroom – A preliminary study. *Education Sciences*, *9*(3), 1-11.

Prayogo, A., & Widyaningrum, L. (2019). WhatsApp-mediated language teachers' reflection of classroom practice: Experience of Indonesian context. *Indonesian Journal of English Language Teaching and Applied Linguistics*, *4*(1), 61-82.

Rahman, A. W., Patintingan, A., & Indahyanti, R. (2018). Learning beyond the classroom: Whatsapp in language learning. *Exposure: Jurnal Pendidikan Bahasa dan Sastra Inggris*, 7(2), 71-89.

Rahmawati, A. & Sujono, F. K. (2021). Digital Communication through Online Learning in Indonesia: Challenges and Opportunities. *Jurnal Aspikom, 6(1).*

Rochmawati, D. & Efendi, A. (2023). College students' perception on the implementation of virtual flipped classroom (VFC) in EFL classroom. *SALEE: Study of Applied Linguistics and English Education*, *4*(2), 409-423.

Salam, U. (2020). The Students' Use of Google Classroom in Learning English. *JPI (Jurnal Pendidikan Indonesia)*.

Subandoro, P. S., & Sulindra, E. (2019). Optimizing Collaborative Learning: Using Google Classroom in Business English Correspondence Class. *VOCATIO: Jurnal Ilmiah Ilmu Administrasi Dan Sekretari*.

Tapscott, D., & Williams, A. D. (2010). Innovating the 21st-century university: It is time. *EDUCAUSE, 45(1)*, 17-29.

Virginiya, P. T. (2023). Higher Vocational Students' Perception on The Use of Canvas Instructur in Blended Flipped-Instructured ESP Classes. *Yavana Bhasha Journal of English Language Education, 6(1)*.

Waicekawsky, L., Laurenti, L., & Yuvero, F. (2020). Teaching ESP Online during the COVID-19 Pandemic: An Account of Argentinian Students on this Teaching Modality. EDP Sciences Journal.

Warni, S., Aziz, T. A., & Febriawan, D. (2018). The use of technology in English as a foreign language learning outside the classroom: An insight into learner autonomy. *LLT Journal*, *21*(2), 148-56.

Warschauer, M. & Meskill, C. (2000). *Technology and second language learning and teaching. Handbook of Undergraduate Second Language Education*. Mahwah, NJ: Lawrence Erlbaum.