# Investigating the Efficacy of Google Meet in Fostering Learner Autonomy and its Interaction with Motivation Levels in Iranian EFL Learners

## **Abstract**

This study investigated the impact of Google Meet instruction on learner autonomy in EFL learners, considering the potential moderating role of learner motivation. A quasi-experimental design with two groups involving 40 intermediate EFL learners was employed. Learner proficiency was assessed using the Oxford Placement Test (OPT). Learner motivation and autonomy were measured by the English Learning Motivation Questionnaire (ELMQ) and the Learner Autonomy Questionnaire (LAQ) before and after the intervention period. The results revealed a statistically significant increase in learner autonomy scores in the experimental group who received instruction through Google Meet, while the control group receiving traditional faceto-face instruction did not experience a significant change. Further analysis explored the interaction effect between learner motivation and Google Meet use. A two-way ANOVA revealed that learners with high motivation scored higher in both groups compared to those with low motivation. However, the experimental group consistently scored higher than the control group regardless of motivation level. Notably, learners with high motivation in the Google Meet group achieved the highest scores, while learners with low motivation in the control group scored the lowest. The results also confirmed that both learner motivation and Google Meet instruction, along with their interaction, significantly affect learner autonomy development. These findings contribute to the understanding of technology-assisted language learning environments and their potential to foster learner autonomy, while highlighting the important role of learner motivation in this process.

Key words: Google Meet, autonomy, motivation, online language learning

#### Introduction

The landscape of language learning is undergoing a remarkable transformation. Educational technologies are empowering learners with unparalleled opportunities to acquire new languages independently (Tran & Duong, 2020; Tsai, 2019; Zhong, 2018). Platforms like Moodle, email, Google Meet, web-blogs, Blackboard, MOOCs, WhatsApp, and Telegram provide anytime, anywhere access to language instruction, shattering geographical limitations. These technologies create a vibrant digital social environment where learners can interact meaningfully with native speakers (Ueki & Takeuchi, 2013). In this dynamic learning environment, fostering learner autonomy becomes paramount. As language learning becomes increasingly personalized, learners require the ability to pursue independent study effectively (Ueki & Takeuchi, 2013).

Within the domain of foreign/second language education, learner autonomy has enjoyed a prominent position as the ultimate objective for decades (Benson & Voller, 2014; Huang & Benson, 2013). Learner autonomy refers to students' capacity to take ownership of their learning journeys (Benson & Voller, 2014). Macaskill and Taylor's (2010) seminal work defines learner autonomy as a multifaceted construct encompassing responsibility, intrinsic motivation, self-regulated learning strategies, and perseverance in the face of challenges. Autonomous learners actively participate in setting their own learning goals, selecting appropriate learning strategies, and monitoring their progress. This self-directed approach extends beyond the confines of the classroom, demanding sustained effort and dedicated practice to achieve success in a new language.

Digital learning environments are seen as both demanding and fostering learner autonomy (Reinders & White, 2016). These environments offer advantages ranging from anytime, anywhere access to resources (Liu, 2009) to heightened student awareness of the learning process (Smith & Craig, 2013) and even encouraging positive attitudes towards autonomous learning (Sato et al., 2020). While research extensively documents the potential of technology-mediated instruction to support learner autonomy (Chen et al., 2017; Murdock & Williams, 2011; Susanti et al., 2023; Tsai, 2019), a critical gap exists in our understanding of how Google Meet specifically interacts with learner motivation in developing learners' autonomy.

Motivation, particularly when supported by self-constructs such as self-efficacy beliefs and the ideal L2 self, plays a critical role in nurturing learner autonomy (Ushioda, 2006). This close relationship between learner motivation and autonomy explains the extensive research focus on this topic (e.g., Lamb, 2011; Ushioda, 2011). This study aimed to investigate the potential of Google Meet to foster learner autonomy in Iranian EFL learners. Furthermore, it seeks to explore the interplay between using Google Meet and learner motivation in enhancing learner autonomy. Understanding this interplay is significant as motivation is widely recognized as the most influential factor in individual differences (Ellis, 2008) observed in language learning success. By addressing this knowledge gap, this study aims to contribute to the development of more effective technology-enhanced environments. These environments would nurture both learner autonomy and motivation, ultimately leading to improved language acquisition outcomes.

## **Google Meet**

A growing body of research (Bahari, 2021; Grabe & Grabe, 2005; Ratnaningsih et al., 2019; Tafazoli, 2019) underscores the pervasiveness and effectiveness of technology-mediated second language learning over the past four decades. The integration of technological tools has been empirically shown to augment learner motivation and foster autonomous learning behaviors (Grabe & Grabe, 2005). Furthermore, CALL offers language instructors innovative pedagogical design possibilities (Azizinezhad & Hashemi, 2013). Ratnaningsih et al. (2019) highlight the

multifaceted advantages of CALL in the educational domain, including fostering active engagement with the target language through task completion and problem-solving activities facilitated by computers. Their research also suggests that CALL can enhance learners' English speaking proficiency. Notably, Tafazoli (2019) emphasizes that CALL benefits students of diverse genders, ages, and across a broad spectrum of learning topics.

Emerging as a prominent tool in educational settings, Google Meet facilitates synchronous online learning, enabling a shift from traditional classroom environments. Beyond its role in facilitating synchronous online learning, Google Meet offers secure virtual meetings and video calls with features such as scheduling, screen sharing, and user management. Notably, its functionality in remote areas is praised for its low bandwidth requirements and stable connection (Ironsi, 2021). Additionally, the user-friendly interface and integration with Gmail make it a convenient choice for educators (Niciporuc, 2014).

This ease of use extends to student adoption as well. Google Meet's widespread adoption among students and educators minimizes the need for extensive tutorials compared to other platforms (Lewandoski, 2015; Kang et al., 2015). This, coupled with privacy features that separate connections, positions Google Meet as a valuable tool for synchronous language learning. Synchronous online learning with Google Meet has the potential to enhance student autonomy and efficiency in reading acquisition, especially during disruptions like pandemics (Martinez-Nuñez et al., 2016; Al-Maroof et al., 2020). The ability to engage in real-time learning through Google Meet goes beyond replicating a physical classroom. It has the potential to bridge learning gaps and promote student interaction, fostering a more connected learning environment (McKinley, 2015).

#### Motivation

Motivation stands as a prominent variable in predicting human behavior and achievement across various domains. Within the educational context, it is strongly linked to learning outcomes, playing a vital role in student engagement and academic success (Deci et al., 1991; Derakhshan et al., 2021; Pawlak et al., 2021; Schiefele, 1991). This holds particularly true in self-directed language learning environments, where learner autonomy is paramount (Gardner & Miller, 2014; Kormos & Csizér, 2014). Harmer (2007) defines motivation as a dynamic and ever-evolving collection of internal forces that influence an individual's thoughts and actions. These internal drives initiate, guide, coordinate, and amplify goal-oriented behaviors, ultimately leading to their evaluation and potential termination (Harmer, 2007). Through this process, individuals prioritize, operationalize, and strive to achieve their initial desires (Harmer, 2007). Motivation can also be conceptualized as an internal impetus that compels individuals to engage in goal-directed actions (Melhe et al., 2021). Brown (2000) suggests that motivation serves as a key factor in determining success or failure when undertaking challenging tasks. In the context of second language acquisition, motivation is typically viewed as a multifaceted construct encompassing effort, desire, and overall attitude towards learning the target language (Gardner, 1985). Dörnyei (2001) further refines this notion, defining motivation as the individual's agency in "choosing a specific action," "investing effort in that action," and "demonstrating persistence in its pursuit" (p. 7).

The field of L2 motivation research boasts a rich history. Gardner and Lambert's (1972) influential work on integrative and instrumental motivation (desire for integration vs. utilitarian value) dominated the latter half of the 20th century. Subsequent research shifted focus to attribution theory (Weiner, 1992) and self-determination theory (Deci & Ryan, 2000), incorporating intrinsic and extrinsic motivations. Building on these advancements, Dörnyei (2001, 2005, 2009) advocated for a theoretical framework centered on the process of motivation in second

language acquisition, culminating in the development of the L2 Motivational Self System. This system, introduced by Dörnyei (2005), integrates psychological constructs such as the concept of possible selves (Markus & Nurius, 1986) and discrepancy theory (Higgins, 1987) to explain motivational processes in language learning. Higgins' theory proposes that humans regulate behavior based on balancing a "promotion focus" (anticipating positive outcomes) and a "prevention focus" (anticipating negative outcomes). Leveraging existing research, Dörnyei (2005) incorporates the concepts of the ideal L2 self, the ought-to L2 self, and the L2 learning experience into the domain of L2 motivation. Ideal L2 Self reflects the learner's aspirations for their L2 proficiency, aligning with their internalized instrumental goals (e.g., desire for career advancement). Ought-to L2 Self focuses on the L2 attributes that learners perceive are necessary to meet external expectations and avoid negative consequences, corresponding to less internalized, more extrinsic instrumental motives. And L2 Learning Experience encompasses the immediate learning environment and its influence on motivation. It captures situated, executive motives that are shaped by experiences with teachers, peers, and instructional practices.

Dörnyei's (2005) L2 Motivational Self System posits that learners are driven by a discrepancy between their current L2 proficiency and their envisioned ideal L2 self. This framework aligns with self-discrepancy theory (Higgins, 1987), where individuals strive to achieve congruence between their self-concept and their "personality relevant self-guides" (Dörnyei, 2005, p. 101). Notably, Dörnyei emphasizes the distinction between future self-guides (ideal and ought-to L2 selves) and goals. While both represent desired future states, future self-guides are imbued with richer cognitive, emotional, visual, and sensory aspects, goals are purely cognitive constructs (Magid & Chan, 2012).

## **Autonomy**

The concept of learner autonomy, defined as the ability to self-direct one's learning journey (Benson, 2011; Holec, 1981), is characterized by a multifaceted metacognitive awareness. This awareness encompasses personal learning styles, subject-specific knowledge, and the ability to adapt to different learning contexts (Van Nguyen & Habók, 2021). It further involves the knowledge and application of learning strategies such as planning, goal setting, monitoring progress, and self-evaluation. The emergence of technology has significantly impacted language learning by placing learner autonomy at the forefront. Researchers have extensively explored the potential of various technologies in fostering this autonomy (e.g., Ribbe & Bezanilla, 2013). These technologies empower learners to not only take individual ownership of their knowledge acquisition, but also to collaborate with others in constructing meaning. Furthermore, technology fosters a more active learning profile by providing access to digital and social environments that promote authentic interactions with native speakers in real-world contexts. Tools like video conferencing software allow geographically dispersed individuals to engage in synchronous communication (Zhong, 2018). Additionally, discussion forums and chat environments facilitate collaborative and socially-rich learning experiences. Notably, scholars posit a consensus that autonomous learners are characterized by both the intrinsic motivation and the strategic ability to leverage technology and resources effectively within their learning environment (Benson, 2007; Lai et al., 2016).

Online learning platforms necessitate a more pronounced level of learner autonomy compared to traditional classroom settings (Cho & Heron, 2015). Learners must exhibit control over monitoring and managing their cognitive abilities, such as planning, focus, and information processing (Cho & Heron, 2015). Effective online learning also requires learners to regulate their

emotions and enjoyment through self-regulation, co-regulation, and social regulation (Zhang et al., 2021). This fosters group engagement in shared processes like collaborative planning, monitoring progress, and evaluation. Broadbent and Poon's (2015) meta-analysis underscores the significant correlation between learner autonomy, technology use frequency, and academic achievement in online courses. The study identified specific learning strategies — metacognitive skills, time management, critical thinking, and effort regulation — as strong predictors of success compared to traditional settings. Interestingly, the preferred strategies may also reflect the inherent constraints of the online learning environment itself (Broadbent et al., 2021). The multifaceted nature of online learning encompasses various delivery formats, including synchronous, asynchronous, uni-modal, and multi-modal (Colson & Hirumi, 2018). This diversity can lead to a wide range of learning experiences for students. Educators can leverage this understanding to tailor their instructional methods to specific learning objectives based on the chosen format (Olsen et al., 2020).

From a technical standpoint, technology grants learners the ability to exercise control, modify the learning process, and enhance engagement. A recent review by Reinders and White (2016) explores the potential of technology-rich environments to cultivate learner autonomy in language education. Their analysis identifies five key themes that technologies can foster: a) Technologies can deliver instructional modules that equip learners with the tools and strategies necessary for self-directed learning. b) Rather than replacing teachers, technology empowers them by automating routine tasks and providing personalized learning resources. c) Technology provides learners with the tools they need to take ownership of their learning journey. d) Technologies facilitate real-time communication and collaboration between geographically dispersed learners. And e) Online platforms become more than just repositories of information through the use of social technologies. Discussion forums and collaborative learning environments provide opportunities for learners to connect, share ideas, and engage in meaningful interactions.

Prior research on learner autonomy within language learning environments explored various factors influencing this autonomy, offering valuable insights (Castillo Zaragoza, 2011; Tsai, 2019; Mohammadi Zenouzagh et al., 2023; Lenkaitis, 2019; Susanti et al., 2023). Castillo Zaragoza's (2011) investigation emphasizes the influence of learner identity on self-directed learning, highlighting the concept of "ideal L2 self" and "ought-to L2 self." Tsai's (2019) research demonstrates the effectiveness of the flipped classroom model in fostering learner autonomy. The post-test revealed significant improvement in the flipped classroom group, particularly in learner strategy use, behavior, and confidence. Further analysis of student data indicated enhanced learner autonomy in areas like self-directed learning.

Mohammadi Zenouzagh et al. (2023) investigated the influence of communication methods on learner autonomy. Their study compared text-based and multimodal computer-mediated communication within an online learning context. The findings revealed that the text-based computer-mediated communication group exhibited higher levels of learner autonomy compared to the multimodal group. Additionally, the text-based group outperformed the multimodal group in specific areas of engagement, namely cognitive and behavioral engagement. However, the study also identified a counterpoint: learners in the multimodal group reported experiencing greater emotional and social engagement. Interestingly, both groups expressed dissatisfaction with the internet infrastructure, suggesting that technical limitations may have impacted the overall learning experience. Lenkaitis (2019) explores the potential of synchronous communication (Zoom) for learner autonomy. Data analysis using Little's (1991) pedagogical principles revealed that Zoom effectively facilitated computer-mediated communication activities, promoting learner autonomy and creating an authentic language learning experience.

Susanti et al. (2023) investigated factors influencing student autonomy in online EFL contexts, focusing on student teachers. The findings revealed a moderate level of learner autonomy among the student teachers, with a need for continued instructor guidance. Motivation and collaboration were identified as key determinants of student autonomy. The study emphasized the importance of a gradual approach to fostering learner autonomy and the role of teachers in providing collaborative activities and strategies that promote active learning within online environments. While these studies offer valuable insights into learner autonomy in online language learning, a critical gap remains. There is a lack of research specifically examining the impact of Google Meet on learner autonomy, particularly considering potential differences in its effectiveness for learners with high vs. low motivation. This gap in the research necessitates a study focusing on how Google Meet influences learner autonomy and how learner motivation might interact with this influence. Exploring these questions can provide valuable insights for tailoring online learning experiences using Google Meet to support learner autonomy across varying motivational levels. Therefore, this study will answer the following research questions:

- 1. Is there a significant difference between Google Meet and conventional instruction in improving EFL learners' autonomy?
- 2. Is there a significant interaction between Google Meet and motivation in improving EFL learners' autonomy?

## Method Design

This study used a quasi-experimental design with two groups. The first group (experimental group) received English language instruction delivered through the Google Meet platform. The second group (control group) received conventional face-to-face English language instruction in a classroom setting.

## **Participants**

Forty intermediate English as a Foreign Language (EFL) learners, enrolled at a private institute in Tehran province, Iran, participated in the study. The sample comprised both males (n = 17) and females (n = 23). Age ranges spanned from 15 to 19 years old. Convenience sampling was employed for participant selection. To ensure participant homogeneity regarding English language proficiency, the Oxford Placement Test (OPT) was initially administered to a pool of 70 EFL students. Participants scoring within the intermediate level range (scores out of a possible 60) were selected for the study. Participants were randomly assigned to two groups: an experimental group receiving instruction through Google Meet and a control group receiving conventional face-to-face instruction. The study adhered to the British Educational Research Association's (BERA) 2011 ethical guidelines. Participants were informed about the research objectives, provided written consent to participate, and were assured of anonymity. Additionally, they were offered the right to ask questions, provide comments, and withdraw from the research at any point.

## **Instruments**

## **Oxford Placement Test (OPT)**

This standardized test, designed by Brown (2005), evaluates learners' overall English language proficiency. It encompasses 60 items in various formats, assessing grammar, vocabulary, and reading comprehension. The OPT was administered to gauge participants' English language proficiency and ensure homogeneity at the outset of the study. Edwards (2007) emphasizes the test's reliability and efficiency in placing learners within appropriate proficiency levels.

Additionally, the OPT aligns with proficiency scales established by the Common European Framework of Reference for Languages (CEFR) and the Cambridge ESOL Examinations (Allen, 2004). Birjandi and Sayyari's (2010) research using the OPT supports its concurrent validity, demonstrating a strong correlation between OPT scores and TOEFL scores.

# **English Learning Motivation Questionnaire (ELMQ)**

This instrument, adapted from Taguchi, Magid, and Papi (2009), is a 21-item, six-point Likert scale questionnaire. It targets key motivational factors relevant to the current research, including integrativeness, instrumentality, attitudes towards L2 speakers and communities, language choice preference, and intended learning effort. Certain items from the original questionnaire were omitted due to redundancy and limited relevance to the study's objectives. The original instrument's reliability, as reported by Taguchi et al. (2009), was .78 using Cronbach's alpha. The revised version employed in this study yielded a reliability coefficient of .90 using Cronbach's alpha (see Appendix B for details).

## Learner Autonomy Questionnaire (LAQ)

The Learner Autonomy Questionnaire (LAQ), developed by Zhang and Li (2004), serves as a validated instrument for measuring the degree of learner autonomy in English language learning. The questionnaire consists of 11 items (detailed in Appendix C) utilizing a Likert-scale format. The design of these items draws upon established learning strategy classifications proposed by Oxford (1990), Wenden (1998), and O'Malley and Chamot (1990). Through empirical evaluation, the LAQ has demonstrated high content validity and reliability, solidifying its use in various research investigations (e.g., Dafei, 2007; Nematipour, 2012).

## **Procedure**

At the initial stage of the study, the Oxford Placement Test was administered to 65 EFL learners as a measure of their general English proficiency in order to homogenize them and ensure that the participants were at intermediate level of English proficiency. Forty participants whose scores were identified at this levels were randomly selected as the study participants. They were randomly assigned to experimental and control group. At the outset of study, written informed consent from all participants were obtained, explaining the study's purpose, procedures, data handling, and their rights. Then, English Learning Motivation Questionnaire (ELMQ) and Learner Autonomy Questionnaire (LAQ) were administered to assess their motivational factors related to English language learning and to gauge their level of autonomy in their English language learning. Next, the program was conducted for 10 session (3 sessions per week). For the Experimental Group, the instruction was delivered through Google Meet, ensuring all sessions are wellstructured and cover the same content as the face-to-face classes. For the Control Group, the instruction was deliver through conventional face-to-face instruction in a classroom setting, ensuring the content aligns with the Google Meet sessions. After the intervention period, ELMQ and LAQ were re-administered to all participants to assess any changes in their motivational factors and learner autonomy.

## **Results**

To answer the first research question concerning the effect of using Google Meet in developing EFL learners' autonomy, Paired sample *t*-test was run.

Descriptive Statistics

Descriptive Statistics				
	Mean	N	Std.	Std. Error
			Deviation	Mean

Pair 1	Pre autonomy for control	24.60	20	2.92	.65
	Post autonomy for control	25.00	20	2.86	.64
Pair 2	Pre autonomy for experimental	25.00	20	2.77	.61
	Post autonomy for experimental	40.85	20	3.04	.68

Table 2
Paired Samples Test

	_		Paired	d Differen	ces		t	df	Sig.
		Mean	Std.	Std.	95% Con	ıfidence			(2-
			Deviati	Error	Interval	of the			tailed
			on	Mean	Differ	rence			)
					Lower	Upper			
1	Pre autonomy for control - Post autonomy for control	400	1.391	.311	-1.051	.251	-1.28	19	.214
2	Pre autonomy for experimental - Post autonomy for experimental	-15.85	3.513	.785	-17.49	-14.20	-20.17	19	.000

Table 2 shows statistically significant differences between the pre and post administration of autonomy scores in the experimental group (p-value = .000) but not the control group (p-value = .214). This suggests that using Google Meet may have a positive effect on EFL learners' autonomy. To answer the second research question concerning any interaction effect between using Google Meet and learners' motivation two-way ANOVA was run, Table 3

Descriptive Statistics

Motivation	Treatment	Mean	Std. Deviation	N
high motivation	control	25.27	2.61	11
	experimental	42.75	2.00	12
	Total	34.39	9.20	23
low motivation	control	24.66	3.27	9
	experimental	38.00	1.85	8
	Total	30.94	7.34	17
Total	control	25.00	2.86	20
	experimental	40.85	3.04	20
	Total	32.92	8.54	40

The results reveal that learners with high motivation scored higher in both the control group (mean 25.27) and the experimental group (mean 42.75) compared to learners with low motivation. Learners in the experimental group scored higher than those in the control group regardless of motivation level. Learners with high motivation in the experimental group scored the highest (mean 42.75) while learners with low motivation in the control group scored the lowest (mean 24.66).

Table 4
Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2622.343a	3	874.114	141.473	.000
Intercept	41621.958	1	41621.958	6736.404	.000
motivation	69.909	1	69.909	11.315	.002
treatment	2313.355	1	2313.355	374.410	.000
motivation * treatment	41.847	1	41.847	6.773	.013
Error	222.432	36	6.179		
Total	46207.000	40			
Corrected Total	2844.775	39			

a. R Squared = .922 (Adjusted R Squared = .915)

Looking at the table specifically, we can see that the F-statistic for motivation (11.315), treatment (374.410), and motivation x treatment (6.773) are all significant (p-value < 0.05). This suggests that both motivation and treatment condition, as well as the interaction between them, have a significant effect on the corrected model.

#### Discussion

This study delves into the impact of Google Meet instruction on learner autonomy in EFL learners, with a particular focus on the potential moderating role of learner motivation. The findings resonate with prior research on interactive online learning environments, lending credence to the notion that Google Meet, with its collaborative features, fosters a sense of ownership and self-directed learning (Tsai, 2019; Han, 2015; Mok, 2014; Lenkaitis, 2019; Ding & Shen, 2019). This resonates with the core tenets of computer-mediated language learning, which emphasizes empowering learners to take charge of their learning journey by selecting materials, engaging with diverse language forms, and evaluating their progress (Wach, 2012). Google Meet offers unique affordances that transcend traditional face-to-face settings. These affordances encompass not only access to authentic learning materials and interactive feedback mechanisms but also the potential for personalized instruction tailored to individual needs. This personalized approach likely

contributes to the development of learner autonomy by fostering a sense of agency and control over the learning process.

The second research question revealed that there was a significant interaction effect between learner motivation and Google Meet instruction. Our findings align with Susanti et al. (2023) in highlighting the pivotal role of motivation in online learning success. This underscores the intricate interplay between the affordances of the platform and the learner's internal drive. Research suggests that technology enhanced language foster a sense of belonging to a global learning community, cultivate transcultural awareness, and prioritize a student-centered approach (Golonka et al., 2014; van den Berghe et al., 2019).

This aligns with González's (2013) observation that integrating technological tools can enhance learner engagement and motivation, with students reporting a more positive and relaxed learning experience. Furthermore, studies by Darasawang and Reinders (2010), Ushida (2005), Warschauer (1996), and Ciampa (2014) suggest that technology-based learning empowers students, fosters a sense of responsibility, and intrinsically increases motivation – potentially due to the informal nature of technology-driven learning compared to traditional classroom settings.

This study's contribution lies in unveiling the significant role of Google Meet instruction in nurturing learner autonomy in EFL learners, while acknowledging the moderating influence of learner motivation. It underscores the importance of fostering a learning environment that not only provides the affordances of technology but also caters to the intrinsic drive of the learners.

This study has convincingly demonstrated the efficacy of Google Meet instruction in nurturing learner autonomy among EFL learners. The findings resonate with the growing body of research that highlights the potential of interactive online learning environments to empower learners. Furthermore, the significant interaction effect between learner motivation and Google Meet instruction underscores the importance of considering both the affordances of the platform and the intrinsic drive of the learners for optimal outcomes.

The study suggests that Google Meet, with its collaborative features and potential for personalized instruction, can be a valuable tool for fostering learner autonomy. By incorporating Google Meet into their teaching repertoire, educators can create learning environments that empower students to take ownership of their learning journey, select learning materials, and engage with the language in a self-directed manner. However, maximizing the impact of Google Meet requires a multifaceted approach. Educators should consider learner differences and adapt their instruction accordingly. Additionally, investigating effective instructional strategies within Google Meet and exploring how instructors can best leverage the platform's features to scaffold autonomy and moderate online interactions are crucial areas for further exploration.

Looking beyond the classroom, these findings also have implications for curriculum development. The affordances of Google Meet can be integrated into broader learning materials and self-study resources, encouraging learners to become more autonomous in their language learning pursuits beyond instructor-led sessions. In conclusion, this study paves the way for a future where EFL learning environments harness the power of technology to empower learners and cultivate their autonomy. By embracing the potential of platforms like Google Meet, educators and curriculum developers can create engaging and effective learning experiences that equip learners with the skills and confidence to navigate their language learning journeys on their own terms.

#### References

- Al-Maroof, R. S., Salloum, S. A., Hassanien, A. E., & Shaalan, K. (2020). Fear from COVID-19 and technology adoption: The impact of Google meet during coronavirus pandemic. *Interactive Learning Environments*, 31(3), 1293-1308. <a href="https://doi.org/10.1080/10494820.2020.1830121">https://doi.org/10.1080/10494820.2020.1830121</a>
- Azizinezhad, M., & Hashemi, M. (2013). A look at the status of computer assisted language learning and its applications. *Procedia Social and Behavioral Sciences*, 93, 121-124. https://doi.org/10.1016/j.sbspro.2013.09.163
- Bahari, A. (2020). Computer-mediated feedback for L2 learners: Challenges versus affordances. *Journal of Computer Assisted Learning*, 37(1), 24-38. https://doi.org/10.1111/jcal.12481
- Benson, P. (2007). Autonomy in language teaching and learning. State-of-the-art Article. *Language Teaching*, 40(1), 21–40. doi:10.1017/S0261444806003958
- Benson, P. (2011). Teaching and researching autonomy (2nd ed.). Pearson Education.
- Benson, P., & Voller, P. (Eds.). (2014). Autonomy and independence in language learning. Routledge.
- Broadbent, J., & Poon, W. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1-13. https://doi.org/10.1016/j.iheduc.2015.04.007
- Broadbent, J., Sharman, S., Panadero, E., & Fuller-Tyszkiewicz, M. (2021). How does self-regulated learning influence formative assessment and summative grade? Comparing online and blended learners. *The Internet and Higher Education*, *50*, 100805. https://doi.org/10.1016/j.iheduc.2021.100805
- Castillo Zaragoza, E. D. (2011). Identity, plurilingualism in self-access centers. In G. Murray, X. Gao & T. Lamb (Eds.) *Identity, motivation and autonomy in language learning* (pp. 91–106). Multilingual Matters.
- Chen Hsieh, J. S., Wu, W. V., & Marek, M. W. (2016). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, 30(1-2), 1-21. <a href="https://doi.org/10.1080/09588221.2015.1111910">https://doi.org/10.1080/09588221.2015.1111910</a>
- Cho, M., & Heron, M. L. (2015). Self-regulated learning: The role of motivation, emotion, and use of learning strategies in students' learning experiences in a self-paced online mathematics course. *Distance Education*, 36(1), 80-99. https://doi.org/10.1080/01587919.2015.1019963
- Colson, R. & Hirumi, A. (2018). A Framework for the design of online competency-based education to promote student engagement. In *Student engagement and participation:* concepts, methodologies, tools, and applications (pp. 203–220). IGI Global.
- Deci, E. L., & Ryan, R. M. (2000). *Handbook of self-determination research: Theoretical and applied issues*. University of Rochester Press.
- Deci, E. L., Vallerand, R. J., Pelletier, L
- . G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26(3–4), 325–346.
- Derakhshan, A., Kruk, M., Mehdizadeh, M., & Pawlak, M. (2021). Boredom in online classes in the Iranian EFL context: Sources and solutions. *System*, 101, 102556. https://doi.org/10.1016/j.system.2021.102556
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.
- Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. Lawrence Erlbaum Associates.

- Dörnyei, Z. (2009). The L2 motivational self-system. In Z. Dörnyei & E. Ushioda (Eds), *Motivation, language identity and the L2 self* (pp. 9-42). Multilingual Matters.
- Ellis, R. (2008). The study of second language acquisition (2nd ed.). Oxford University Press.
- Gardner, R. C. (1985). Social psychology and second language learning: The role of attitudes and motivation. Arnold.
- Gardner, R. C. & Lambert, W. E. (1972). *Attitudes and motivation in second-language learning*. Newbury House Publishers.
- Gardner, D., & Miller, L. (2014). *Managing self-access language learning*. University of Hong Kong Press.
- Grabe, M. & Grabe, C. (2005). *Integrating technology for meaningful learning*. Houghton Mifflin College.
- Han, Y. J. (2015). Successfully flipping the ESL classroom for learner autonomy. *NYS TESOL Journal*, 2(1), 98–109.
- Harmer, J. (2007). The practice of English language teaching. Longman Pearson Education Limited.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94(3), 319-340. <a href="https://doi.org/10.1037//0033-295x.94.3.319">https://doi.org/10.1037//0033-295x.94.3.319</a>
- Holec, H. (1981). Autonomy in foreign language learning. Pergamon.
- Huang, J. (., & Benson, P. (2013). Autonomy, agency and identity in foreign and second language education. *Chinese Journal of Applied Linguistics*, 36(1). <a href="https://doi.org/10.1515/cjal-2013-0002">https://doi.org/10.1515/cjal-2013-0002</a>
- Ironsi, S.C. (2017). Effect of test anxiety on academic performance of EFL learners. Lambert Academic Publishing.
- Kang, M., Kim, S., Kang, J., Jang, J. & Kim, S. (2015). The Predictive Power of Self-Regulated Learning, Teaching Presence, and Perceived Interaction on the Outcomes of Google Plusbased Project Learning. In S. Carliner, C. Fulford & N. Ostashewski (Eds.), *Proceedings of EdMedia 2015--World Conference on Educational Media and Technology* (pp. 1444-1451). Montreal, Quebec, Canada: Association for the Advancement of Computing in Education (AACE). Retrieved May 5, 2024 from https://www.learntechlib.org/primary/p/151420/.
- Kormos, J., & Csizér, K. (2013). The interaction of motivation, self-regulatory strategies, and autonomous learning behavior in different learner groups. *TESOL Quarterly*, 48(2), 275-299. <a href="https://doi.org/10.1002/tesq.129">https://doi.org/10.1002/tesq.129</a>
- Lai, C., Yeung, Y., & Hu, J. (2015). University student and teacher perceptions of teacher roles in promoting autonomous language learning with technology outside the classroom. *Computer Assisted Language Learning*, 29(4), 703-723. <a href="https://doi.org/10.1080/09588221.2015.1016441">https://doi.org/10.1080/09588221.2015.1016441</a>
- Lamb, M. (2011). Future selves, motivation and autonomy in long-term EFL learning trajectories. In G. Murray, X. Gao, & T. Lamb (Eds), *Identity, motivation and autonomy in language learning* (pp. 177-194). Multilingual Matters.
- Lenkaitis, C. A. (2019). Technology as a mediating tool: Videoconferencing, L2 learning, and learner autonomy. *Computer Assisted Language Learning*, 33(5-6), 483-509. https://doi.org/10.1080/09588221.2019.1572018
- Lewandowski, M. (2015). Creating virtual classrooms (using Google Hangouts) for improving language competency, *Language Issues: The ESOL Journal*, 26(1), 37-42.

- Liu, T. (2009). A context-aware ubiquitous learning environment for language listening and speaking. *Journal of Computer Assisted Learning*, 25(6), 515-527. https://doi.org/10.1111/j.1365-2729.2009.00329.x
- Macaskill, A., & Taylor, E. (2010). The development of a brief measure of learner autonomy in university students. *Studies in Higher Education*, *35*(3), 351-359. <a href="https://doi.org/10.1080/03075070903502703">https://doi.org/10.1080/03075070903502703</a>
- Magid, M., & Chan, L. (2012). Motivating English learners by helping them visualise their ideal L2 self: Lessons from two motivational programmes. *Innovation in Language Learning and Teaching*, 6(2), 113-125. https://doi.org/10.1080/17501229.2011.614693
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41(9), 954-969. doi:10.1037/0003-066X.41.9.954.
- Martinez-Nuñez, M., Borras-Gene, O., & Fidalgo-Blanco, Á. (2016). Virtual learning communities in Google plus, implications, and sustainability in MOOCs. *Journal of Information Technology Research*, 9(3), 18-36. <a href="https://doi.org/10.4018/jitr.2016070102">https://doi.org/10.4018/jitr.2016070102</a>
- McKinley, J. (2015). Critical argument and writer identity: Social constructivism as a theoretical framework for EFL academic writing. *Critical Inquiry in Language Studies*, *12*(3), 184-207. https://doi.org/10.1080/15427587.2015.1060558
- Melhe, M. A., Salah, B. M., & Hayajneh, W. S. (2021). Impact of training on positive thinking for improving psychological hardiness and reducing academic stresses among academically-late students. Educational Sciences: Theory and Practice, 21(1), 132–146. https://doi.org/10.12738/jestp.2021.3.010
- Mohammadi Zenouzagh, Z., Admiraal, W., & Saab, N. (2023). Learner autonomy, learner engagement and learner satisfaction in text-based and multimodal computer mediated writing environments. *Education and Information Technologies*, 28(11), 14283-14323. https://doi.org/10.1007/s10639-023-11615-w
- Mok, H. N. (2014). Teaching tip: The flipped classroom. *Journal of Information Systems Education*, 25(1), 7–11.
- Murdock, J. L., & Williams, A. M. (2011). Creating an online learning community: Is it possible? *Innovative Higher Education*, *36*(5), 305-315. <a href="https://doi.org/10.1007/s10755-011-9188-6">https://doi.org/10.1007/s10755-011-9188-6</a>
- Niciporuc, T. (2014). Comparative analysis of the engagement rate on Facebook and Google Plus social networks, Proceedings of International Academic Conferences (No. 0902287), International Institute of Social and Economic Sciences.
- O'malley, J. M., & Chamot, A. U. (1990). *Learning strategies in second language acquisition*. Cambridge University Press.
- Olsen, J. K., Sharma, K., Rummel, N., & Aleven, V. (2020). Temporal analysis of multimodal data to predict collaborative learning outcomes. *British Journal of Educational Technology*, 51(5), 1527-1547. https://doi.org/10.1111/bjet.12982
- Pawlak, M., Derakhshan, A., Mehdizadeh, M., & Kruk, M. (2021). Boredom in online English language classes: Mediating variables and coping strategies. *Language Teaching Research*, 136216882110649. <a href="https://doi.org/10.1177/13621688211064944">https://doi.org/10.1177/13621688211064944</a>
- Ratnaningsih, D., Purba, D., Wiratno, D., & Nofandi, F. (2019). The influence of computer-assisted language learning (CALL) to improve English speaking skills. *English Linguistics, Literature, and Language Teaching in a Changing Era*, 144-149. https://doi.org/10.1201/9780429021039-19

- Reinders, H., & White, C. (2016). 20 years of autonomy and technology: How far have we come and where to next? *Language Learning & Technology*, 20(2), 143–154. <a href="http://llt.msu.edu/issues/june2016/reinderswhite.pdf">http://llt.msu.edu/issues/june2016/reinderswhite.pdf</a>
- Ribbe, E., & Bezanilla, M.-J. (2013). Scaffolding learner autonomy in online university courses.

  \*Digital Education Review (24), 98–112.

  https://www.researchgate.net/publication/316968024
- Schiefele, U. (1991). Interest, learning, and motivation. *Educational Psychologist*, 26(3–4), 299–323. https://psycnet.apa.org/doi/10.1207/s15326985ep2603&4\_5
- Sanprasert, N. (2010). The application of a course management system to enhance autonomy in learning English as a foreign language. *System*, *38*(1), 109-123. <a href="https://doi.org/10.1016/j.system.2009.12.010">https://doi.org/10.1016/j.system.2009.12.010</a>
- Sato, T., Murase, F., & Burden, T. (2020). An empirical study on vocabulary recall and learner autonomy through Mobile? Assisted language learning in blended learning settings. *CALICO Journal*, *37*(3), 254-276. <a href="https://doi.org/10.1558/cj.40436">https://doi.org/10.1558/cj.40436</a>
- Smith, K. M., & Craig, H. (2013). Enhancing learner autonomy through CALL: A new model in EFL curriculum design. *CALICO Journal*, 30(2), 252–278. https://doi.org/10.11139/cj.30.2.252-278
- Susanti, A., Rachmajanti, S., & Mustofa, A. (2023). Between teacher' roles and students' social: Learner autonomy in online learning for EFL students during the pandemic. *Cogent Education*, 10(1). https://doi.org/10.1080/2331186x.2023.2204698
- Tafazoli, D. (2019). Attitude towards computer-assisted language learning: Do gender, age and educational level matter? *Teaching English with Technology*, 19(3), 22–39. <a href="http://www.tewtjournal.org">http://www.tewtjournal.org</a>
- Tran, T. Q., & Duong, T. M. (2020). EFL learners' perceptions of factors influencing learner autonomy development. *Kasetsart Journal of Social Sciences*, 41(1), 194–199. <a href="https://doi.org/10.1016/j.kjss.2018.02.009">https://doi.org/10.1016/j.kjss.2018.02.009</a>
- Tsai, Y. (2019). Promotion of learner autonomy within the framework of a flipped EFL instructional model: Perception and perspectives. *Computer Assisted Language Learning*, 34(7), 979-1011. https://doi.org/10.1080/09588221.2019.1650779
- Ueki, M. & Takeuchi, O. (2013). Forming a clearer image of the ideal L2 self: the L2 Motivational Self System and learner autonomy in a Japanese EFL context, *Innovation in Language Learning and Teaching*, 7(3), 238-252, <a href="http://dx.doi.org/10.1080/17501229.2013.836205">http://dx.doi.org/10.1080/17501229.2013.836205</a>
- Ushioda, E. (2006). Language motivation in a reconfigured Europe: Access, identity, autonomy. *Journal of Multilingual and Multicultural Development*, 27(2), 148-161. <a href="https://doi.org/10.1080/01434630608668545">https://doi.org/10.1080/01434630608668545</a>
- Ushioda, E. (2011). Motivating learners to speak as themselves. In G. Murray, X. Gao, & T. Lamb (Eds), *Identity, motivation and autonomy in language learning* (pp. 11-24). Multilingual Matters.
- Nguyen, S. V., & Habók, A. (2021). Designing and validating the learner autonomy perception questionnaire. *Heliyon*, 7(4), 1-11. <a href="https://doi.org/10.1016/j.heliyon.2021.e06831">https://doi.org/10.1016/j.heliyon.2021.e06831</a>
- Weiner, B. (1992). Human motivation: Metaphors, theories, and research. Sage.
- Zafar, S., & Meenakshi, K. (2012). Individual learner differences and second language acquisition:

  A review. *Journal of Language Teaching and Research*, *3*(4). <a href="https://doi.org/10.4304/jltr.3.4.639-646">https://doi.org/10.4304/jltr.3.4.639-646</a>

- Zhang, Z., Liu, T., & Lee, C. B. (2021). Language learners' enjoyment and emotion regulation in online collaborative learning. *System*, 98, 102478. <a href="https://doi.org/10.1016/j.system.2021.102478">https://doi.org/10.1016/j.system.2021.102478</a>
- Zhong, Q. M. (2018). The evolution of learner autonomy in online environments: A case study in a New Zealand context. *Studies in Self-Access Learning Journal*, 9, 71–85. https://doi.org/10.37237/090106