



TEACHER'S ROLE IN FACILITATING EFL AUTONOMOUS LEARNING THROUGH DIGITAL ASSISTANCE: A SYSTEMATIC REVIEW

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Abstract

This article presents a systematic review of studies exploring how teachers facilitate independent learning among students using digital tools. With the rise of digital resources, the researchers aimed to investigate the teacher's role in the classroom. The selected articles were sourced from Google Scholar and manual searches, employing proximity and Boolean operators to identify a total of 39 publications. The review adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, focusing on articles published within the last five years (2020 to 2024). Key criteria included participants' age, publication type, and specific models of autonomous learning, such as flipped classrooms and digital applications. Articles that did not meet these criteria were excluded from the review. Ultimately, 12 articles were selected for further analysis. The findings indicate that, despite the abundance of digital resources available to support independent study, the role of teachers remains crucial in the learning process.

Keywords: *Teacher's role, EFL students, Autonomous learning, Digital aids, Systematic Review*

A. INTRODUCTION

1. Background

In the rapidly evolving landscape of education, the role of the teacher in facilitating autonomous learning among English as a Foreign Language (EFL) students is undergoing a profound transformation, largely influenced by the integration of digital tools (Benson, 2013). As traditional classroom settings give way to more dynamic, technology-enhanced environments, educators are increasingly tasked with guiding students toward self-directed learning while leveraging digital resources to



enhance language acquisition. This shift not only challenges teachers to rethink their instructional strategies but also opens new avenues for fostering learner independence. By effectively incorporating digital assistance into their pedagogical practices, teachers can support EFL learners in developing the skills and confidence necessary for autonomous learning, ultimately empowering them to take charge of their educational journey in a digital age.

Autonomous learning encompasses various approaches that empower learners to take charge of their educational experiences, fostering independence and self-direction. One prominent type is Self-Regulated Learning (SLR), where students set their own learning goals, monitor their development, and modify their techniques depending on feedback and self-reflection (Harris et al., 2015). This approach emphasizes the importance of metacognition, as learners actively participate in planning, monitoring, and evaluation. their own learning processes. By developing skills like goal-setting and time management, and self-assessment, students become more adept at navigating their educational paths and adapting to challenges, ultimately enhancing their ability to learn independently.

Another significant form of autonomous learning is technology-mediated learning (Lai, 2013), which leverages digital tools and resources to facilitate self-directed education. This type includes the use of online platforms, educational apps, and digital content that allow learners to explore subjects at their own pace and according to their personal interests.

One teaching model that effectively supports autonomous learning is the Flipped Classroom model (Uzunboylu & Karagozlu, 2015). In this approach, traditional in-class instruction is reversed: students first engage with new content independently outside of class, typically through video lectures, readings, or interactive online materials. Class time is then dedicated to applying and exploring this content through discussions, problem-solving activities, and collaborative projects. This model empowers students to learn at their own pace outside of the classroom, allowing them to review and understand the material before coming to class. As a



result, classroom time can be used more effectively for deeper engagement with the material and personalized support.

A substantial body of research has been dedicated to exploring various aspects of autonomous learning, shedding light on how students can effectively take charge of their educational journeys. This extensive body of studies encompasses diverse methodologies and contexts, from self-regulated learning strategies to technology-mediated learning environments. Recognizing the critical role that educators play in facilitating this process, the researcher undertook a comprehensive review of these articles to delve deeper into the teacher's role in fostering autonomous learning. By systematically analyzing the findings from multiple studies, the researchers sought to elucidate how teachers can best support and enhance student autonomy, identifying key practices, challenges, and strategies that contribute to successful outcomes. This investigation strives to bridge the gap between theoretical study and practical implementation, giving useful insights educators striving to create environments that promote self-directed learning and empower students to take ownership of their educational experiences.

2. Literature review

2.1. *Autonomous Learning in EFL Contexts*

Autonomy has been identified as a critical characteristic of successful language learners in English as a Foreign Language (EFL) contexts (Benson, 2013; Inayati, 2015; Tuan, 2021; Wong & Nunan, 2011; Zhang & Ardasheva, 2019). Learning a language autonomously involves students taking charge of their own educational journey, including making informed choices about learning strategies and resources beyond formal classroom instruction. This self-directed approach not only enhances learner engagement but also contributes to more effective and sustainable language acquisition. Research demonstrates that increased learner autonomy significantly boosts motivation, engagement, and proficiency (Duarte et al., 2016; Nunan, 2003; O'Reilly, 2014; Rusdi et al., 2023). Treesattayanmune et al., (2024) argue that autonomy is shaped by cognitive and behavioral aspects, particularly when students engage in activities outside the traditional classroom. Alonazi, (2017) found that while



many Saudi EFL students initially struggled with autonomous practices without teacher mediation, they experienced greater satisfaction and better results when given control over their learning.

The concept of learner autonomy is becoming more widely acknowledged as a crucial approach to language acquisition in Asian countries like Vietnam and Thailand. Tuan (2021) notes that while Vietnamese students value autonomous learning, many still rely on teacher support to practice it effectively. Similarly, Treesattayanmune et al., (2024) found that Thai university students actively monitored their progress and selected learning activities, yet the learning process remained a collaborative effort between students and teachers. This underscores the essential role of teachers not only as facilitators but also as guides in navigating self-directed learning.

Despite its benefits, the implementation of autonomous learning faces significant challenges, including cultural attitudes, lack of self-efficacy, and limited resources (Ya-Hui Chang, 2020; Zerga Wejira, 2019). Integrating digital tools and providing ongoing teacher support have been shown to effectively promote autonomy. Teachers who strategically incorporate technology and offer scaffolded learning experiences are better positioned to guide students toward becoming autonomous learners (Ammar Al-Khawlani, 2018; Asiri & Shukri, 2020). Nonetheless, there is still a lack of research addressing how teachers could improve student autonomy. Therefore, by examining various functions that teachers play in fostering autonomy through digital learning approaches, this study aims to fill this gap. By examining current practices and identifying effective strategies, this research seeks to contribute to improved educational practices and foster more independent learning experiences for EFL students.

2.2. Key Theories Supporting Autonomous Learning

Theories such as Self-Efficacy Theory, Self-Determination Theory, and Metacognitive Theory offer profound insights into the psychological, motivational, and cognitive processes that are integral to fostering autonomous learning. These theories highlight the critical elements that enable learners to take control over their



educational experiences, thereby promoting a more self-autonomous approach to learning.

Self-Efficacy Theory Bandura, (1986) is a fundamental framework for understanding the development of autonomous learning. According to Bandura, a person's self-efficacy—which is characterized as their confidence in their capacity to carry out activities successfully—determines how they face obstacles in the classroom. High self-efficacy is linked to higher levels of motivation, determination, and resilience—qualities necessary for self-directed learning. Students who possess a high level of self-efficacy are more likely to take on difficult assignments, persevere through challenges, and bounce back from failure. In this context, self-efficacy is not merely a product of learning; it is a driving force that empowers learners to take responsibility for their educational outcomes and to persist in their pursuit of knowledge.

Self-Determination Theory Miller et al., (1988) deepens the understanding of autonomous learning by emphasizing the role of intrinsic motivation. Deci & Ryan, (1985) argue that autonomous learning is most effectively realized when learners' basic psychological needs for autonomy, competence, and relatedness are satisfied. When these needs are met, learners are naturally inclined toward self-directed learning. For instance, when learners perceive that they have control over their learning process (autonomy), believe in their ability to master the material (competence), and feel a sense of connection to others (relatedness), they are more likely to be intrinsically motivated. This intrinsic motivation is crucial for sustaining engagement and commitment to learning, thereby facilitating deeper comprehension and long-term retention of knowledge. Self-Determination Theory, therefore, provides a robust framework for understanding how the satisfaction of psychological needs can foster autonomous learning.

Metacognitive Theory Flavell, (1979) offers essential insights into the cognitive processes that underpin autonomous learning. Metacognition, which involves the awareness and regulation of one's cognitive processes, is a critical component of self-directed learning. Flavell emphasizes that learners with strong metacognitive skills are better equipped to plan, monitor, and evaluate their learning strategies, leading to



more effective self-regulation. This self-regulatory capability enables learners to adapt their approaches based on their understanding of their cognitive processes, thereby enhancing the efficiency and effectiveness of their learning. In the context of autonomous learning, metacognitive skills are indispensable, as they empower learners to independently navigate their educational journey, make informed decisions, and optimize their learning outcomes. By fostering metacognitive awareness, educators can support the development of learners who are capable of taking control of their learning and achieving greater academic success.

These theories emphasize the cognitive, psychological, and motivational aspects of self-directed learning. They offer a thorough framework for comprehending how intrinsic motivation, self-efficacy, and metacognitive abilities support the growth of self-directed learners. Through the implementation of these theoretical frameworks, teachers can establish learning environments that enable students to take control over their educational journeys, resulting in more significant, effective, and sustained learning outcomes.

2.3. Teacher's Role in Facilitating Autonomous Learning

Teachers play a significant role in fostering EFL autonomous learning through digital assistance by assuming various key roles. According to Voller, (2014), there are three main roles of teachers in developing students' self-directed learning capabilities.

As facilitators, teachers guide students in navigating their learning journey by providing essential technical and psychosocial support. The facilitator role involves helping students plan their independent learning, which includes conducting needs analysis, setting learning objectives, planning work, and selecting appropriate materials. With this support, students may take control of their education, resulting in a more individualized and efficient learning process (Alonazi, 2017). Beyond the technical aspects, facilitators also offer psychosocial support by encouraging and motivating students, helping them overcome challenges, and fostering a learning environment that promotes independence.

As counsellors, teachers provide crucial guidance and support when students encounter difficulties in their language learning. The counsellor role involves one-on-



one interactions where teachers listen to students' concerns, help them reflect on their learning experiences, and offer advice on how to overcome obstacles. This role is especially important in fostering students' self-awareness and self-acceptance, which are critical for achieving self-autonomy in learning (Britto, 2014; Voller, 2014). By acting as counsellors, teachers ensure that students remain motivated and resilient, even when faced with challenges, thus promoting sustained engagement in autonomous learning. In digital learning environments, where students may feel isolated or overwhelmed, the counsellor's support becomes even more critical in maintaining their motivation and focus.

Teachers also serve as managers and organizers, where they are responsible for leading, planning, and organizing learning activities that align with students' needs and interests. In this role, teachers design dynamic, well-structured learning environments that empower learners to take charge of their education. This entails planning a variety of engaging and goal-appropriate activities, like debates, role plays, presentations, and group discussions (Yan, 2012). As managers, teachers ensure that students understand their responsibilities and the significance of the tasks they are undertaking. They provide clear instructions, monitor progress, and actively participate in problem-solving when students encounter difficulties. This role is crucial in helping students develop the skills and habits necessary for effective autonomous learning, such as time management, critical thinking, and self-evaluation. By organizing and managing learning experiences effectively, teachers empower students to become more self-directed, confident, and active participants in their language learning journey.

2.4. Digital Tools and Teaching Approach for EFL Autonomous Learning

The incorporation of digital tools into English as a Foreign Language (EFL) instruction has fundamentally altered traditional teaching methodologies, particularly in fostering learner autonomy. Recent studies investigated the effectiveness of digital tools such as learning apps and YouTube and related teaching approaches like MOOCs, flipped classrooms, online learning models, and digital storytelling in fostering autonomous language learning.



Almusharraf, (2021) investigated the application of English learning apps and internet resources for vocabulary acquisition. Through a case study involving interviews with eight students, classroom observations, and reflective analyses, Almusharraf, (2021) demonstrated that autonomous learning approaches significantly enhance students' self-confidence, self-possession, and learning outcomes in Saudi Arabia. Nevertheless, the study also highlighted the necessity of teacher guidance in effectively utilizing the digital tools like movies YouTube, blogs, etc. for vocabulary learning across diverse contexts.

Han & Hamzah (2024) examine how students' self-efficacy in learning English was affected by the flipped classroom model. According to their quasi-experimental study, which was carried out at a higher vocational college in Lanzhou City, China, students' self-efficacy is significantly increased by the flipped classroom strategy. The study underscores the critical role of teachers in designing engaging activities, fostering student participation, supporting independent learning, and providing supplementary guidance, thereby facilitating autonomous learning through digital tools.

Rusdi et al., (2023) explored the use of YouTube as a digital tool for self-regulated learning (SRL). Through qualitative phone interviews, the study found that YouTube positively impacted students' understanding of English, enhanced their engagement with the language, and facilitated reflective learning. The study highlighted how YouTube's interactive features contribute to autonomous learning by allowing students to control their learning pace and content, thereby supporting their self-regulation and motivation.

Inayati et al., (2021) conducted a survey supplemented by interviews involving undergraduate students from East Java, Indonesia. Their research indicated that while online learning supports independent practice, learners encountered difficulties with systematic autonomous learning, long-term goal setting, and evaluation. The study recommended the development of flexible curricula and increased support from educators and institutions, pointing to existing gaps in the effective integration of digital tools for autonomous learning.



Mardhiah et al., (2024) explored the impact of digital storytelling on students' speaking skills through a descriptive case study at Universitas Bumi Persada. The study, involving first-year English training and education students, found that digital storytelling significantly enhanced speaking skills by integrating culturally rich narratives. It highlighted the teacher's role in guiding students through scriptwriting, multimedia use, and providing feedback, demonstrating how digital storytelling can effectively support autonomous language learning.

These studies illustrate the transformative potential of digital tools and teaching approach in EFL education, emphasizing their benefits and the continuing need for teacher support in optimizing their effectiveness for promoting learner autonomy.

B. METHOD

The data in this study was gathered using a systematic research method named PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). The articles for further reviewed were collected from Google Scholar. In searching them, the researchers implemented Boolean (Libraries, n.d.) and Proximity Operators (Elihami, 2022).

The Boolean operators consist of three conjunction words: AND , OR, NOT:

- AND = used to combine concept or idea or keywords. The purposes is to narrow the search strategy
- OR = used for synonym of words or concept or ideas. The purpose is to expand the result of search strategy
- NOT = used to eliminate any keyword from the concept of searching.
- () = Enclosing search strategies within parentheses helps tailor your results to better match your topic. Search engines prioritize processing the terms inside the parentheses before addressing the terms outside of them. This approach ensures that the search results are more precisely aligned with your intended query.

Additionally, these symbols are used as proximity operators:

- Quotation marks (" ") = used to tell the database that the words must appear as an exact phrase; e.g. "information and communication technology"



- Wildcard (*) = used to truncate word, taking place of one or more characters; e.g. comput* may be used for compute, computer, computing, computed
- Question mark (?) = used to replace one character; e.g. wom?n may be used for woman, women.

Furthermore, the researchers identified this formulation to search the articles applied in Google Scholar: (“autonomous learning OR self-learning” AND technology? OR digital? AND “higher education” OR university AND “English learning”). They found that there were 77 articles available related to the formula.

Additionally, the researchers also found 3 (three) related articles by manual search. Afterwards, the researchers defined included and excluded categories in deciding the articles’ selection.

3.1. The Inclusion and Exclusion Criteria

The researcher’s consideration about the inclusion and the exclusion of reviewed articles are based on the following criteria summed in the table:

Table 1. The Inclusion and Exclusion Criteria of Reviewed Articles

No.	Criteria	Inclusion	Exclusion
1.	Full paper access	✓	
2.	Abstract	✓	
3.	last five years of publication, from 2020 to 2024	✓	
4.	Participants are from higher degree students	✓	
5.	Studying autonomous learning including flipped classroom model, online or hybrid learning.	✓	
6.	The use of digital or learning application learning apps, MOOCs, and digital storytelling	✓	
7.	Proceeding paper,		X
8.	Book		X
9.	Monograph		X
10.	Thesis and Dissertation		X
11.	Participants are from below higher degree		X
12.	Inaccessible journal		X
13.	Unrelated topic and subject		X

(Source authors, 2024)

Based on the above consideration, the researchers then put them in PRISMA flow diagram as shown below:

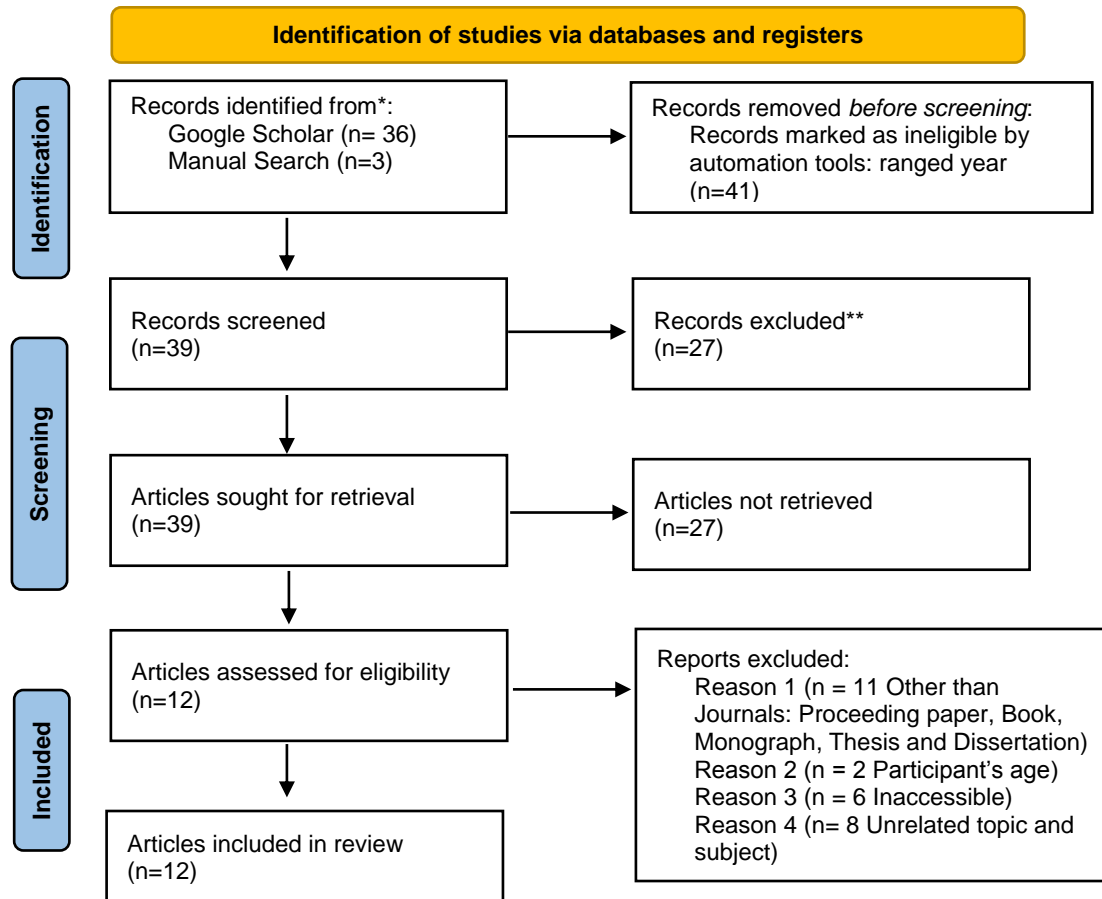


Figure 1. PRISMA 2020 flow diagram for new systematic reviews which included searches of databases (Source Page et al., 2021)

C. FINDINGS AND DISCUSSION

4.1. Findings

The findings highlighted several critical insights into the role of teachers in facilitating EFL autonomous learning through digital assistance. One prominent finding is the significant impact of digital tools on fostering learner autonomy. For



instance, Almusharraf, (2021) found that English learning apps were effective in enhancing students' self-confidence and academic performance. However, the study notes that instructor direction was essential in order to optimize the advantages of these digital tools. This underscores the essential role of teachers in integrating and contextualizing digital resources to align with students' needs.

Similarly, according to Han & Hamzah (2024), students' self-efficacy in learning English was significantly increased by the flipped classroom. To fully utilize the advantages of the flipped classroom, their study emphasizes how important it is for teachers to be involved in creating interesting activities and offering constructive feedback. This finding suggests that although digital tools can support self-directed learning, the quality of teacher interaction has a major impact on how effective those tools are.

The study by Rusdi et al., (2023) revealed that YouTube positively affects students' self-regulated learning by allowing them to control their learning pace and content. This flexibility not only enhances students' engagement with the language but also supports their self-regulation and motivation. The ability to access and interact with content at their own pace reinforces the role of digital tools in promoting autonomous learning.

Digital storytelling was found to significantly improve students' speaking skills, as demonstrated by (Mardhiah et al., 2024). The incorporation of culturally rich narratives through digital storytelling proved beneficial in enhancing language practice. The study notes that teachers play a crucial role in guiding students through scriptwriting, multimedia use, and providing constructive feedback. This guidance is essential for optimizing the use of digital storytelling in supporting autonomous learning. The following table is the summary of the findings within the literature review:

Table 2. The summary of Teacher's Role in Facilitating EFL Autonomous Learning through Digital Assistance

No	Author(s)	Digital Tool(s)	Methodology	Results
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1.	Han & Hamzah (2024)	Flipped Classroom	A quasi-experimental study in a higher vocational college in Lanzhou City, China using test and semi-structured interview.	<ul style="list-style-type: none">• The flipped classroom approach significantly enhanced students' self-autonomy in English language learning.• Teachers' role in designing engaging activities, encouraging student participation, supporting independent learning, monitoring student progress, and providing additional guidance and support.
2.	Mardhiah et al (2024)	Digital Story Telling	A descriptive case study was conducted with eight first-year English training and education students at Universitas Bumi Persada.	<ul style="list-style-type: none">• Digital storytelling significantly enhances students' speaking skills and shows the benefits of including culturally rich narratives in language teaching.• The teacher's roles include guiding students in exploring and adapting folktales, instructing on scriptwriting and multimedia use, providing feedback on storytelling skills, offering individual support, and encouraging reflection on their experiences.
3.	Treesattayanmune & Baharuddin (2024)	Online learning model	A quantitative study with 83 participants selected based on their availability or accessibility.	<ul style="list-style-type: none">• Participants had high learner autonomy but moderate responsibility for their learning. They interacted well overall, except in learner-learner interaction. Lower autonomy corresponded with significantly lower interaction scores.• The teacher's roles include setting learning objectives, monitoring students' progress during lessons, and choosing activities or techniques for learning and tracking students' out-of-class progress.



4.	Rusdi et al (2023)	Youtube	Qualitative using a phone call interview.	YouTube had a positive effect on SRL. The participants showed that YouTube improved their English, made learning enjoyable, and allowed them to evaluate on their English skills.
5.	Salamanja & Kholis (2023)		Literature Review.	The teacher's role in fostering autonomous language learning includes acting as a facilitator, counselor, manager, and organizer.
6.	Ariebowo & Pustpitasari (2022)	Online Learning	Quantitative survey with 656 sophomore students and 10 teachers at a college of aerospace technology in Yogyakarta, Indonesia.	<ul style="list-style-type: none"> • Dependence on teachers, difficulty in setting goals, controlling, evaluating, and reflecting on learning, acknowledged by both learners and teachers, and passive learning with lack of confidence in being proactive. • Teachers should promote more about self-autonomous learning and teach them about learning strategies
7.	Chingakham (2022)	Flipped Classroom	Comparative Study between achievement test scores of flipped classroom English teaching and traditional teaching methods from 2015 to 2020.	The traditional method was more effective in all countries except South Korea, where the flipped classroom method worked better.
8.	Alabdulkareem (2021)	Flipped classroom	A mixed method using questionnaires and interviews at King Saud University.	<ul style="list-style-type: none"> • The flipped classroom method improved students' satisfaction, interaction, and comprehension of the course. • Curating and uploading relevant videos and articles to a wiki account, providing resources for students to access before class, and administering quizzes to assess understanding and ensure engagement with the content.



9.	Hamsia, Riyanto & Arianto (2021)	Online Learning model	Descriptive qualitative research with 80 first-semester medical students at Muhammadiyah University of Surabaya.	Online learning allows independent English practice anytime and anywhere, increases student interest, and boosts motivation to speak English.
10.	Inayati, Rachmadhani, Utami (2021)	Online Learning	Survey design with supporting interviews, involving undergraduate students from the English Language Education Department at a private university in Malang, East Java, Indonesia.	Learners struggled with systematic autonomous learning, long-term goal setting, and evaluation, relying on short-term planning. They avoided traditional classroom structures and expected more support from teachers and institutions. The study suggests flexible curricula and improved support for learner autonomy.
11.	Wei (2021)	Massive Open Online Course (MOOC)	Literature Review.	It is recommended for teachers in China's higher education to select and personalize MOOC resources, guide students, supervise students and task giver.
12.	Almusharraf (2020)	English learning apps and internet resources for vocabulary learning	A case study using interviews with 8 students from two different classrooms, observations of classroom activities, participants' reflections on an English class, and their English learning autobiographies.	<ul style="list-style-type: none"> • Autonomous learning approaches enhanced Kingdom of Saudi Arabia (KSA) students' self-confidence, self-possession, and learning outcomes. • Most participants were aware of the need for teachers' guidance in learning strategies, particularly in understanding what, where, and how to use vocabulary correctly in different contexts.

Despite these advancements, challenges remain in the effective implementation of autonomous learning strategies. Ariebowo & Puspitasari, (2022) highlighted issues such as dependency on teacher support and difficulties in goal setting and self-evaluation. Similarly, Inayati et al., (2021) identified challenges related to systematic



autonomous learning and long-term goal setting, suggesting a need for flexible curricula, and increased institutional support. These findings indicated that while digital tools offer substantial benefits, their effectiveness is contingent upon overcoming these implementation challenges and providing adequate support for both learners and teachers.

4.2. Discussion

The findings from the systematic review underscore the transformative potential of digital tools in EFL education, particularly in promoting learner autonomy. The integration of tools such as learning apps, MOOCs, flipped classrooms, online learning models, YouTube, and digital storytelling has demonstrated significant benefits in enhancing students' self-confidence, self-efficacy, and speaking skills. However, these advantages are closely linked to the level of teacher involvement and support provided during the learning process.

Almusharraf, (2021) and Han & Hamzah, (2024) studies highlighted that while digital tools could foster autonomy, their effectiveness was maximized when teachers were actively involved in guiding and supporting students. This involvement was crucial for ensuring that learners could effectively utilize these tools and overcome any challenges they might face. Teachers' roles in designing engaging activities, providing feedback, and facilitating the integration of digital tools are critical in achieving the desired outcomes of autonomous learning. In line with this, the study conducted by (Yang et al., 2022) as they investigated the impacts of using Google Assistant (GA) on improving listening and speaking skills of 34 university EFL learners in an autonomous second language learning (ASLL) context. Over six weeks, participants used GA at home, with half receiving additional teacher guidance via weekly evaluation forms. The results showed that those who received guidance demonstrated significant improvements in both listening and speaking skills, particularly in oral development, compared to those without guidance. The findings highlighted the potential of digital tool, with sustained teacher support, in enhancing students' English skills.



The positive impact of YouTube on self-regulated learning, as reported by (Rusdi et al., 2023), demonstrated the potential of digital platforms to support personalized and flexible learning experiences. This finding aligns with the broader understanding that digital tools can enhance motivation and engagement by allowing learners to take control of their learning processes. However, the effectiveness of such tools depends on their integration into a well-structured learning framework supported by teachers. Likewise, the study by (Mardhiah et al., 2024) on digital storytelling highlighted the importance of incorporating culturally relevant content and the need for teacher guidance in using such tools. This, again, reinforced the idea that while digital tools could enhance language skills, their successful implementation requires careful planning and teacher support.

Despite these positive outcomes, challenges remain in effectively implementing autonomous learning strategies. Issues such as dependency on teacher support, difficulties with goal setting, and the need for flexible curricula, as identified by Ariebowo & Puspitasari, (2022) and Inayati et al., (2021) suggested that digital tools alone are not sufficient to foster autonomy. Comprehensive support from teachers and institutions is essential to address these challenges and ensure that digital tools were used effectively to promote students' autonomy. Therefore, it implied that while digital tools offer significant potential for fostering autonomous learning, their success is dependent on the role of teachers in facilitating their integration and addressing the associated challenges.

D. CONCLUSION

The results of the systematic review highlight the transformative potential of digital tools in EFL education, especially in fostering learner autonomy. The use of tools such as learning apps, MOOCs, flipped classrooms, online learning models, YouTube, and digital storytelling has shown significant benefits in enhancing students' self-confidence, self-efficacy, and speaking skills. However, these advantages are closely tied to the level of teacher involvement and support provided throughout the learning process.



REFERENCE

- Almusharraf, N. (2021). *Perceptions and Application of Learner Autonomy for Vocabulary Development in Saudi EFL Classrooms*. *International Journal of Education and Practice*, 9(1), 13–36. <https://doi.org/10.18488/journal.61.2021.91.13.36>
- Alonazi, S. M. (2017). *The Role of Teachers in Promoting Learner Autonomy in Secondary Schools in Saudi Arabia*. *English Language Teaching*, 10(7), 183–202. <https://doi.org/10.5539/elt.v10n7p183>
- Ammar Al-Khawlani. (2018). *The Influence of the Learning Environment on Learner Autonomy: A comparative Study of Polish and Yemeni EFL Undergraduate Learners*. *Sino-US English Teaching*, 15(3), 109–124. <https://doi.org/10.17265/1539-8072/2018.03.001>
- Ariebowo, T., & Puspitasari, E. (2022). *Students' teacher-dependency and passiveness in online learning during COVID-19 pandemic*. *Journal of Education and Learning (EduLearn)*, 16(2), 235–243. <https://doi.org/10.11591/edulearn.v16i2.20450>
- Asiri, J., & Shukri, N. (2020). *Preparatory Learners' Perspectives of Learner Autonomy in the Saudi Context*. *Arab World English Journal*, 11(2), 94–113. <https://doi.org/10.24093/awej/vol11no2.8>
- Bandura, A. (1986). *Social foundations of thought and action*, Englewood Cliffs, NJ: Prentice-Hall. *The Health Psychology*, Sage Publications, New Delhi, 94–106.
- Benson, P. (2013). *Teaching and Researching Autonomy* (C. N. Chandlin & David R. Hall, Eds.; 2nd ed.). Routledge.
- Britto, M. J. (2014). *The Role of Counselling in English Language Teaching*. In *Journal of English Language and Literature* (Vol. 1, Issue 2).
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviour*. Plenum.
- Duarte, M., Leite, C., & Mouraz, A. (2016). *The effect of curricular activities on learner autonomy: the perspective of undergraduate mechanical engineering students*. *European Journal of Engineering Education*, 41(1), 91–104. <https://doi.org/10.1080/03043797.2015.1056101>
- Elihami, S. (2022). *Pemanfaatan Operator Boolean Sebagai Literasi Informasi*. *Jurnal Telekomunikasi, Kendali Dan Listrik*, 3(1), 88–94.
- Flavell, J. H. (1979). *Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry*. *American Psychologist*, 34(10), 906–911. <https://doi.org/10.1037/0003-066X.34.10.906>
- Han, W., & Hamzah, M. (2024). *Research on the influence of flipped classroom on self-efficacy in English language learning of Chinese higher vocational college students*. *Discover Education*, 3(1), 11. <https://doi.org/10.1007/s44217-024-00097-8>



- Harris, K. R., Graham, S., MacArthur, C. A., Reid, R., & Mason, L. H. (2015). *Self-Regulated Learning Processes and Children's Writing*. In Handbook of Self-Regulation of Learning and Performance. Routledge. <https://doi.org/10.4324/9780203839010.ch12>
- Inayati, N. (2015). *Promoting English Independent Study for EFL University Students in Indonesia*. Language Education in Asia, 6(1), 46–57. <https://doi.org/10.5746/LEiA/15/V6/I1/A5/Inayati>
- Inayati, N., Rachmadhani, R. A., & Utami, B. N. (2021). *Student's strategies in online autonomous English language learning*. JEES (Journal of English Educators Society), 6(1), 59–67. <https://doi.org/10.21070/jees.v6i1.1035>
- Lai, C. (2013). *A Framework for Developing Self-Directed Technology Use for Language Learning*. Language Learning and Technology, 17(2), 1–23. <http://llt.msu.edu/issues/june2013/lai.pdf>
- Libraries, A. (n.d.). "What is a Boolean Operator?" <http://library.alliant.edu>
- Mardhiah, A., Kamaliah, N., Helmiyadi, H., & Lathifatuddini, L. (2024). *Enhancing Indonesian EFL Learners' Speaking Skills through Digital Storytelling based on Local Folktales*. SAGA: Journal of English Language Teaching and Applied Linguistics, 5(2), 81–93. <https://doi.org/10.21460/saga.2024.52.190>
- Miller, K. A., Deci, E. L., & Ryan, R. M. (1988). *Intrinsic motivation and self-determination in human behavior*. Contemporary Sociology, 17(2), 253.
- Nunan, D. (2003). *The Connection Between Autonomy and Communicative Teaching*. JALT 2003, 7–15.
- O'Reilly, E. N. (2014). *Correlations among Perceived Autonomy Support, Intrinsic Motivation, and Learning Outcomes in an Intensive Foreign Language Program*. Theory and Practice in Language Studies, 4(7), 1313–1318. <https://doi.org/10.4304/tpls.4.7.1313-1318>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). *The PRISMA 2020 statement: an updated guideline for reporting systematic reviews*. In BMJ. <https://doi.org/10.1136/bmj.n71>
- Rusdi, L., Asma, A., Husna, A., & Karimipour, M. (2023). *YouTube and English Learning: Transformative Impact on Self-Regulated Learning Competencies*. Idarah (Jurnal Pendidikan Dan Kependidikan), 7(2), 227–240. <https://doi.org/10.47766/idarah.v7i2.1981>
- Treesattayanmune, P., Mastura Baharudin, S., & My, U. (2024). *Learner Autonomy and Interaction in English Language Learning among Thai EFL Undergraduate Students*.



Journal: Language Education and Acquisition Research Network, 17(1), 393–415.
<https://so04.tci-thaijo.org/index.php/LEARN/index>

- Tuan, D. M. (2021). *Learner Autonomy in English Language Learning: Vietnamese EFL Learners' Perceptions and Practices*. Indonesian Journal of Applied Linguistics, 11(2), 307–317. <https://doi.org/10.17509/ijal.v11i2.29605>
- Uzunboylu, H., & Karagozlu, D. (2015). *Flipped classroom: A review of recent literature*. World Journal on Educational Technology: Current Issues, 142–147. <https://doi.org/10.18844/wjet.v7i2.46>
- Voller, P. (2014). *Does the teacher have a role in autonomous language learning? In Autonomy and independence in language learning* (pp. 98–113). Routledge.
- Wong, L. L. C., & Nunan, D. (2011). *The learning styles and strategies of effective language learners*. System, 39(2), 144–163. <https://doi.org/10.1016/j.system.2011.05.004>
- Ya-Hui Chang, L. (2020). *Taiwanese EFL Language Teachers' Beliefs and Actual Practices Related to Learner Autonomy*. The Electronic Journal for English as a Second Language, 4(4), 1–15.
- Yan, S. (2012). *Teachers' Roles in Autonomous Learning*. Journal of Sociological Research, 3(2), 557–562. <https://doi.org/10.5296/jsr.v3i2.2860>
- Yang, C. T.-Y., Lai, S.-L., & Chen, H. H.-J. (2022). *The impact of intelligent personal assistants on learners' autonomous learning of second language listening and speaking*. Interactive Learning Environments, 1–21. <https://doi.org/10.1080/10494820.2022.2141266>
- Zerga Wejira, C. (2019). *EFL Freshmen Students and Teachers Perception and Practice of Learner Autonomy: The Case of Wolyta Sodo University*. International Journal of Scientific and Research Publications (IJSRP), 9(2), 398–419. <https://doi.org/10.29322/IJSRP.9.02.2019.p8652>
- Zhang, X., & Ardasheva, Y. (2019). *Sources of college EFL learners' self-efficacy in the English public speaking domain*. English for Specific Purposes, 53, 47–59. <https://doi.org/10.1016/j.esp.2018.09.004>