



Exploring Students' Informal Digital Learning of English (IDLE) and Self-Regulated Language Learning from a Sociocultural Perspective

Fauziah & Novita Diana
Universitas Jabal Ghafur, Indonesia

Abstract: *This study investigates the phenomenon of informal digital learning of English (IDLE) among students engaged in independent online learning environments. Focusing on practices for students' language development, this study explores how students autonomously acquire English language skills through informal digital means and examines the implications. It employs a mixed-methods approach, combining surveys and interviews to collect and analyse data from a diverse group of independent online learners of English (N= 182) from 23 different Indonesian universities. Quantitative data reveals that approximately 45.1% of the variation in self-regulated language learning can be explained with informal digital learning of English identified as one of the predictors. On the other hand, qualitative data findings indicate that students actively engage in IDLE through a variety of digital channels, including social media, online forums, language learning apps, and YouTube tutorials. These informal learning activities encompass a wide range of language skills, from vocabulary acquisition and pronunciation improvement to cultural understanding and conversational proficiency. Implications of this research point to the importance of recognising and harnessing students' IDLE practices in formal educational settings. Educators and institutions can leverage these insights to design more effective online language learning programmes that incorporate elements of informal digital learning.*

Keywords: *Independent learning; Informal Digital Learning of English (IDLE); EFL self-regulated learning*

INTRODUCTION

Language learning in the digital age has witnessed significant transformations with the emergence of informal digital learning practices. The increasing availability and accessibility of digital technologies have opened up new avenues for language learners to engage with English beyond the confines of the traditional classroom setting (Lee, 2020; Reinders & Benson, 2017). With the proliferation of digital resources and the increased accessibility of online platforms, learners often engage in informal digital learning practices outside formal educational settings (Soyoo et al., 2021; Zhang et al., 2021). In the Indonesian context, where English is taught as a foreign language (EFL), the role of informal digital learning of English (IDLE) holds particular significance. Lee et al. (2021) report that, through it, Indonesian EFL students can gain a deeper

understanding of the sociolinguistic realities of English and appreciate the linguistic diversity within the language. This can help them foster a more inclusive and culturally sensitive language learning environment. Sociocultural theorists John-Steiner and Mahn (1996), rooted in the work of Vygotsky, emphasise the pivotal role of cultural artifacts, language, and social interaction in mediating and shaping learning experiences. They recognise learning as a collaborative and socially situated process, influenced by the interactions and engagements individuals have within their sociocultural environments.

Within the community of practice, as noted by Wanger (2000), social learning systems involve multiple interconnected communities of practice that interact and influence each other. Applying this perspective to language learning, it becomes crucial to examine how digital technologies and informal learning environments shape the sociocultural context of language learning in the Indonesian EFL classroom. IDLE encompasses a range of digital tools and resources that facilitate informal language learning, such as social media platforms, language learning apps, online communities, and authentic English language input (Tan, 2013; Zhang et al., 2021). These digital environments enable learners to engage in authentic communication and collaboration, providing opportunities for social interaction and negotiation of meaning. Learners can connect with peers and native speakers of English, engaging in conversations, sharing ideas, and receiving feedback, thereby constructing their linguistic and sociocultural knowledge.

This issue calls for a shift in educational approaches, where educators integrate digital technologies and informal learning environments into the curriculum. By doing so, educators can create an inclusive and dynamic EFL learning environment that aligns with the sociocultural realities of language learners in the digital age. Such an approach fosters authentic and meaningful language learning experiences, enhances learner engagement and motivation, promotes sociocultural interaction, and empowers learners to take ownership of their language learning journey (Zhang et al., 2021; Zhang & Zhang, 2019). This paper aims to explore and analyse: (1) to what extent self-regulated learning and motivation influence students' engagement in informal digital learning of English (IDLE); and (2) how these elements influence students' learning practices within sociocultural contexts. By examining the roles of IDLE, this study contributes to the existing literature on language learning in the digital age and provides insights for educators and policymakers seeking to create effective language learning environments in the Indonesian EFL context.

LITERATURE REVIEW

Digital Learning of English (IDLE) Practices

The literature highlights various IDLE practices that EFL learners engage in. Bin-Hady et al. (2021) and Lee et al. (2017) identify as one prominent practice the use of different digital devices and resources, such as social media platforms and learning apps, for language learning purposes. These platforms offer opportunities for learners to connect with native speakers of English, engage in

conversations, and access authentic language input. Language learning apps, such as Duolingo and Memrise, are also popular among Indonesian EFL learners, providing gamified and interactive language learning experiences. Online communities and forums allow learners to seek support, exchange ideas, and receive feedback on their language production. These IDLE practices offer learners a digital space to interact, collaborate, and negotiate meaning with peers and native speakers (Valentín et al., 2013).

Researchers (Lai et al., 2015; Lee & Lee, 2021; Lee, 2019; Sung et al., 2015) suggest several benefits associated with IDLE in the EFL classroom. Firstly, IDLE enhances learner autonomy and agency, as students can personalise their language learning experiences by selecting resources that align with their interests and needs. Secondly, IDLE provides opportunities for authentic language use, enabling learners to practise their English skills in real-world contexts while promoting sociocultural interactions. Thirdly, IDLE fosters learner engagement and motivation, as the use of digital technologies and interactive platforms enhances learner interest and enjoyment. However, challenges such as limited access to technology, issues of digital literacy, and potential distractions also need to be considered.

Sociocultural Interactions

IDLE contributes to the sociocultural interactions of EFL learners. Through online communication with native speakers and peers, learners engage in sociocultural exchanges that shape their understanding of the English language and its cultural contexts (Lee, 2020; Lee & Lee, 2021). IDLE facilitates the negotiation of meaning, the development of intercultural competence, and the construction of a learner's identity as an English language user. Learners navigate sociocultural norms, values, and practices within digital environments, forming connections and affiliations that contribute to their sociocultural development. Sociocultural interactions play a significant role in informal digital learning of English (IDLE). When learners engage with digital resources and communities, they are not just acquiring language skills; they are also participating in sociocultural interactions that shape their language acquisition experiences (Lee & Sylvén, 2021). In online communities and social learning environments, students can choose to join online communities, forums, and social media groups where they can interact with other English learners and native speakers. These interactions create opportunities for social learning, allowing learners to observe, imitate, and engage in authentic language use. Students can also seek language exchange partners or tandem language learning opportunities online to facilitate cross-cultural interactions and language practice, allowing them to share their own culture and learn about others' cultures.

Online language learning communities are often diverse and inclusive, bringing together people from various backgrounds, countries, and cultures. This diversity enriches the sociocultural interactions by exposing learners to different accents, dialects, and perspectives. Engaging in sociocultural interactions helps learners develop cultural sensitivity and awareness. They learn to navigate cultural differences and adapt their language use accordingly. Students often construct

online identities tied to their language learning journey. They may feel a sense of belonging to online language learning communities, and develop a language learner identity. Positive sociocultural interactions can enhance learners' motivation to continue their language learning journey (Lee & Lee, 2021). Encouragement and support from peers and mentors can be powerful motivators. In summary, sociocultural interactions in informal digital learning of English go beyond language acquisition. They encompass cultural understanding, identity formation, and the development of a sense of belonging to global language learning communities. These interactions enrich the language learning experience and highlight the interconnectedness of language and culture in the digital age.

Self-Regulated Learning (SRL) and Technology

The concept of “L2 learning beyond the classroom” in Benson & Reinders (2011) and Reinders & Benson (2017) is highly relevant to informal digital learning of English. Both studies emphasise the importance of informal settings, learner autonomy, real-life application, community, and technology in language learning, resulting in interconnected and complementary approaches to language acquisition. This framework emphasises the classroom while acknowledging the role of technology as a facilitator of language learning. Informal digital learning relies on various technological tools and platforms, making it easier for learners to access English resources, communicate with others, and immerse themselves in the language. In focusing on real-life application of language skills, IDLE allows learners to employ English in authentic contexts, such as communicating with native speakers through language exchange platforms, participating in online communities, or watching English-language content (Sockett, 2014). This supports the notion that language learning should be relevant to everyday life.

Collaborative learning environments, where students interact with peers, provide opportunities for discussion, knowledge sharing, and collaborative problem-solving. When peers support each other's learning, it enhances SRL by offering different perspectives and encouraging self-reflection (Wenger, 2000). Support from knowledgeable mentors or teachers can be invaluable. These mentors can provide guidance, answer questions, and offer scaffolding to help learners set appropriate goals and strategies for learning. Observing others' successful self-regulated learning practices can serve as a model for learners. When learners see their peers or teachers effectively self-regulating their learning, it can inspire them to adopt similar strategies. Positive social interactions that provide feedback, praise, and encouragement can boost learners' motivation and self-efficacy. When learners receive recognition for their efforts, they are more likely to persist in self-regulated learning activities.

Self-regulated learning plays a multifaceted role in influencing a positive learner identity and sustaining motivation for learning, as discussed by Lamb (2007). It facilitates the creation of a nurturing learning environment for students, offering them a platform for self-expression and bolstering their self-esteem (Gao, 2009; Teo et al., 2010). Additionally, Tofoli and Sockett (2013) highlight how technology enables the informal online language learning process. In culturally diverse contexts, sociocultural factors can celebrate and acknowledge learners'

cultural backgrounds and perspectives, fostering a sense of cultural identity and belonging, which can positively impact self-regulation.

RESEARCH METHOD

Ivankova and Creswell's (2009) mixed-methods research design was employed to gain a comprehensive understanding of the complex interplay between students' informal digital language learning practices and sociocultural influences. This design involves the integration of both quantitative and qualitative data collection and analysis methods. Questionnaires in the quantitative phase were devised to gather structured data on students' IDLE practices and sociocultural contexts. They were developed using 29 structured Likert scale items. The questionnaire was designed to assess various aspects of IDLE – self-regulated learning (nine items), motivation (ten items), and sociocultural factors (ten items) – and was adopted from Lee and Lee (2021) and Lee and Sylvén (2021).

The authors initiated the procedure of reaching out to and recruiting participants, encompassing both students from our own academic institution and those from our colleagues' institutions. Access to the participants was established through a negotiation process that involved explaining the study's objectives and assuring potential subjects of the confidentiality of their responses. All participants were explicitly informed that their involvement was a matter of personal choice and would not impact their academic progress.

A sample of (N= 182) undergraduate English students from 23 different Indonesian universities engaged in IDLE was selected, ensuring diversity in terms of sociocultural backgrounds, English proficiency levels, and learning contexts. The questionnaire was administered to the participants from June to August 2023. Quantitative data was analysed using descriptive statistics (e.g., mean, standard deviation) to provide an overview of IDLE practices, self-regulated learning, motivation, and sociocultural influences among the participants. Table 1 presents data on the total duration of students' English language learning experiences. Meanwhile, the researchers' primary objective was to illustrate the students' engagement in informal digital learning of English (IDLE) during their undergraduate years.

Table 1. *The whole period of English study for each participant*

Items	Frequency	%	Valid Percent	Sig	Cumulative Percent
3-6 years	88	48.4	48.4	0	48.4
7-10 years	41	22.5	22.5	0	70.9
> 10 years	53	29.1	29.1	0	100.0
Total	182	100.0	100.0		

Following this, the researchers analysed the questionnaire results and contacted participants who expressed interest in participating in the interview phase. Researchers conducted semi-structured interviews with a subset of participants from the survey sample. The participants were voluntary subjects of these 10- to 15-minute interviews, which were guided by an interview protocol that allowed for open-ended exploration of their narratives and experiences. Audio recordings and transcriptions of the interviews were made to facilitate subsequent analysis. Qualitative data from the interviews was analysed using thematic techniques (Braun & Clarke, 2006) which provide a systematic and structured approach for analysing qualitative data, as conducted by Sukirman & Kabilan (2023). Initially, the process begins with familiarising oneself with the data by thoroughly reading the interview responses. This step allows researchers to gain a holistic view of the content and the contextual backdrop in which the data is situated. Following the familiarisation phase, the researcher proceeds to the initial coding step. This is a meticulous process of identifying and labelling key concepts, phrases, or themes within the narrative. These codes serve as the building blocks for understanding the content more deeply. For instance, these codes can encompass a range of topics, from 'Setting learning goals' to 'Improving speaking skills,' 'Using Yubo apps,' and 'Making international friends.' Once initial coding is complete, the researcher organises related codes into potential themes. These themes represent overarching patterns or ideas within the data. In the provided example from Molly's response, themes might encompass 'Goal setting for language learning' and the 'Multifunctional use of Yubo apps.'

To ensure the accuracy of these initial themes, a review and refinement process is necessary. Careful consideration of whether the themes accurately capture the essence of the data is crucial. Moreover, this stage explores whether there are subthemes or variations within these themes that require further examination and fine-tuning. The subsequent stages involve organising the data according to each theme or subtheme, potentially including relevant quotes extracted from the interview data. These quotes are invaluable for providing context and illustrating the depth of each theme. The naming of each theme is equally important, requiring descriptive and meaningful labels that encapsulate the essence of each theme, such as 'strategic language learning'. Following this, narrative building is undertaken, whereby a story or narrative is crafted around each theme. This narrative development process utilises the data and quotes to enrich the themes, offering context and depth to the analysis.

The interpretation and synthesis stage calls for reflection on the broader implications of the themes and how they relate to the research question or objectives. This is where researchers draw meaningful insights from participants' responses, shaping the narrative and providing valuable context for the findings. The subsequent report writing phase involves documenting the analysis in a clear and organised manner. This typically results in a qualitative report that includes sections dedicated to each theme, supported by excerpts from the interview data, enhancing the credibility and depth of the findings. Throughout this analytical journey, peer review and validation are integral. Seeking feedback from colleagues or peers ensures the validity and rigor of the analysis, contributing to

the overall quality of the research. Lastly, the researchers' reflexivity is crucial. Acknowledging one's perspective and potential biases that may have influenced the analysis adds transparency and enhances the credibility of the study.

Qualitative findings were integrated with quantitative data to provide a more comprehensive understanding of how sociocultural factors shape IDLE practices and self-regulated learning behaviours. The integration phase involved triangulating data from both the quantitative and qualitative phases to provide a holistic view of students' IDLE experiences from a sociocultural perspective. Researchers compared and contrasted findings from the quantitative and qualitative phases to identify convergent or divergent patterns. This process involved examining how sociocultural factors identified in interviews align with survey data. We synthesised the overarching conclusions and insights derived from the integrated analysis, emphasising the interplay between sociocultural contexts, self-regulated learning, and IDLE. By employing a mixed-methods research design, this study can capture the breadth and depth of students' experiences in informal digital language learning, providing a more comprehensive understanding of the complex sociocultural dynamics at play.

FINDINGS AND DISCUSSION

Self-Regulated Learning and Motivation Influence Students' Engagement in Informal Digital Learning of English (IDLE)

Based on the findings from the survey data regarding the role of self-regulated language learning and student motivation in informal digital learning of English (IDLE) in the current digital era within the context of English language education, it is evident that IDLE influences students' ability to autonomously manage and regulate their learning processes. This includes setting learning objectives, selecting learning resources, planning their study time, monitoring their progress, and self-evaluation. Students' self-regulated learning can be enhanced through the utilisation of digital resources that assist them in planning and organising their learning. Similarly, motivation to learn plays a pivotal role in the success of language learners. Informal digital learning motivates students, as it often offers engaging, interactive, and relevant content tailored to their interests and needs.

In the context of regression analysis, Table 2 presents several key statistics. The R square value is 0.451, indicating that approximately 45.1% of the variability in self-regulated language learning can be explained by the regression model used. The F value is 148.129, and its associated significance value (Sig) is 0 (a very low p-value). The constant term (B constant) is 0.479, representing the intercept of the regression model. Based on this information, it can be concluded that the regression model as a whole is statistically significant. This conclusion is drawn from the high F value and the very low p-value (0), which suggests that at least one of the predictors used has a significant impact on self-regulated language learning.

The fact that approximately 45.1% of the variability in self-regulated language learning can be explained by the predictors employed in the model

implies that these predictors have the capacity to account for a substantial portion of the variation in self-regulated language learning. In summary, it can be concluded that both self-regulated language learning and motivation significantly influence IDLE, and the regression model is capable of explaining approximately 45.1% of the variability in self-regulated language learning, with informal digital learning of English being one of the predictors.

Table 2. Multiple linear regression analysis results on the students' IDLE

Predictors	Model Summary		Anova		Coefficients
	R square	%	F	Sig	B constant
Self-regulated language learning (IDLE)	.451	45.1	148.129	0	.479
Motivation	.102	10.2	20.367	0	.219
Other supports	.369	36.9	105.431	0	.345

There is a wide range of responses across the categories, indicating that students' engagement in IDLE varies, and there may be different subgroups with varying levels of involvement. Depending on the distribution of responses, educators and institutions can tailor their support and resources to accommodate students at different engagement levels. For example, if a majority of students are highly engaged, there may be opportunities to further enhance their IDLE experiences. Analysing questionnaire data on the extent of engagement in IDLE helps educational stakeholders gain a comprehensive understanding of how students are utilising digital resources for English language learning outside formal classroom settings. It can inform decisions regarding the provision of resources, support, and interventions to foster effective IDLE practices.

The findings that both self-regulated language learning and motivation significantly influence informal digital learning of English (IDLE) align with established theories in the fields of education, psychology, and language learning (Lai, 2017; Zhang & Zhang, 2019). The study's conclusion that motivation significantly influences IDLE supports the SRL framework by highlighting the importance of both intrinsic and extrinsic motivation (Lee, and Lee, 2021). Intrinsic motivation might be related to a genuine interest in language learning, while extrinsic motivation could be tied to external rewards like grades or recognition.

The sociocultural perspective emphasises the role of self-regulation in learning. It posits that individuals can actively control and manage their own learning processes, including setting goals, monitoring progress, and using self-regulation strategies (Timothy et al.,2010). The study's finding that self-regulated language learning significantly impacts IDLE aligns with Vygotsky's sociocultural theory (John-Steiner & Mahn, 1996), emphasising the pivotal role of self-regulation in effective learning. Students who can effectively regulate their learning are better equipped to engage in IDLE and make the most of digital

resources. This suggests that perceived usefulness and perceived ease of use influence users' intentions to adopt and use technology. The study's results, which indicate that IDLE is influenced by self-regulated language learning and motivation, can be linked to technological enhancement in learning. If students perceive IDLE as useful for their language learning and find it easy to use, they are more likely to engage with it.

Thus, the study's findings align with well-established theories in education, psychology, and technology adoption. They underscore the importance of motivation and self-regulated learning in the context of informal digital language learning and provide empirical support for theoretical frameworks that emphasise these factors in the educational process (Lee & Lee, 2021; Tan, 2013).

Students' Learning Practices Within Sociocultural Contexts

Autonomous Learning Activities

The interview data reveals that students are actively engaging in IDLE within their sociocultural contexts. Several key points can be discussed based on this data. Frequency of IDLE data indicates that students are engaging in IDLE regularly. This suggests a strong interest and motivation to learn English outside formal settings. As prime examples, two excerpts are provided in this section. First, there is Molly (pseudonym), a female, 23 years old, in her third year of majoring in an English education department. She practised different IDLE experiences for more than two hours on a daily basis. Based on her words, IDLE seemed to make a positive impact on her.

I use English language learning apps on my smartphone almost every day. It's not just me; many of my friends do the same. We find it convenient to learn English through these apps, and we often recommend specific ones to each other. I regularly use different apps in different time. In the morning when I am preparing for morning class, I'm listening to English podcast in Spotify to improve my listening. In my spare time in campus, I scroll some social media that related to material I just learned in my class. And at night I focus on longer video from YouTube related to English learning because I'm preparing myself to take IELTS test. I frequently participate in English language discussion groups on social media platforms. I have Yubo to socialise with new friends from different countries. It feels like a natural way to learn. My interactions with fellow learners and native speakers have significantly improved my English skills.

The data highlights the existence of online language learning communities, where students interact with peers and native speakers. These communities create opportunities for authentic language practice. The comment "It feels like a natural way to learn" suggests that IDLE within sociocultural contexts can be perceived as a seamless and organic way to acquire language skills. The data and discussion point to the idea that this student is actively engaging in IDLE within her sociocultural contexts, where peer influence and online communities all play crucial roles in facilitating informal digital English language learning.

The findings of this study unveiled several intriguing explanations regarding student behaviour. Firstly, they shed light on the methods employed by students to uncover learning resources and the extent to which they engage in this practice. Secondly, they delve into the manner in which these resources are utilised in their interactions with one another, elucidating their role in the development of informal learning communities among students. Lastly, the research interrogates students' perceptions regarding the value attributed to the digital materials themselves, as well as the significance of the interactions surrounding these materials as a means of bolstering their learning endeavours.

Supportive Environment

Another student, Bella, is a 22-year-old female, in her third year of majoring in English. Sociocultural factors like family and social connections are significant. Her motivation in learning English has been strongly influenced by her family, who provide a supportive environment for her learning journey.

Since I was a junior high school, I have spent a great deal of time listening to various English songs. I don't understand the meaning of the songs at that time but I remember almost all of the songs' lyric. These songs belong to my mom's music collection. I live in an area with limited access to formal English classes, so I rely heavily on online resources and language learning apps. My learning context has forced me to be self-regulated and resourceful. I also play online games that force me to talk to my team players in English. And recently, I register myself for some online English speech contest to evaluate my English ability. From competition to competition, I trained myself to communicate with others in English that help me to be more open-minded. I can easily talk to anyone from any country in real-life situations because I just talk as I normally do. Even I have limited access of English in my surrounding, it never pushes me back. I can find so many online resources to improve my English.

The data highlights how sociocultural contexts influence students' learning practices in IDLE. In this second example, family plays a significant role. The parents' habits at home and support have a direct influence on the student's commitment to learning English. Even though English is not the primary language, the norm of using English in social media, influenced by family and friends, encourages the student to adopt English in her online interactions. The influence of limited access to formal education is highlighted in this sociocultural context, where the student is compelled to rely on online resources and become self-regulated in her learning practices due to the lack of traditional educational opportunities.

Sociocultural contexts, such as limited access to formal education, can foster resourcefulness and self-directed learning. Students adapt and find ways to access digital resources independently. In essence, these examples demonstrate that sociocultural contexts can exert a profound influence on students' learning practices in IDLE. These influences can vary from external pressures and family expectations to peer norms and the necessity to be resourceful in the absence of

formal educational opportunities. Understanding these sociocultural influences is crucial for educators and policymakers seeking to support effective informal digital language learning strategies.

Finding Legitimate Sources

Students in IDLE often choose their own digital resources, such as language learning apps, online courses, websites, and social media platforms. They decide which resources align with their learning goals and preferences.

Excerpt 1

When it comes to choosing online learning resources, I start by identifying my learning goals. For instance, if I'm trying to improve my speaking skill, I'll set specific objectives like mastering conversational English or enhancing my vocabularies. I choose Yubo apps to not only practise my speaking but I also make friend with international vibes (International social networking with different members all around the world). [Molly, 5 Sept 2023]

This kind of activity encourages students' autonomous behaviour. They set their own goals, select resources, and adapt their strategies based on their progress (Teo et al., 2010; Zhang et al., 2021). Ally, a 20-year-old male English student, has successfully navigated the challenge of finding reputable learning resources to support his language studies. To ensure the quality and reliability of these resources, he employs a multi-faceted approach.

Excerpt 2

For daily basis English conversation, I'd begin by searching for language learning in social media such as Instagram. I'd read reviews, check out account ratings, and maybe even try out a few online free lessons or trials if available from reputable platforms. [Ally, 27 Sept 2023]

Student preferences play a role in this selection process. Bella: "My preferences are crucial. I know that I learn best through interactive exercises and gamified experiences, so I tend to gravitate towards apps or courses that offer those features. Additionally, I consider factors like scheduling flexibility because I have a part-time job, so I need resources that fit my availability". Fany, a 21-year-old male student, finds social media resources to be invaluable tools for exploring the English language in his daily life. These platforms offer him a diverse range of opportunities to immerse himself in English content, thereby enhancing his language skills.

Excerpt 3

Social media can be valuable too. I often join language learning groups or follow relevant accounts on platforms like Instagram or YouTube. These communities share tips, practise challenges, and often suggest additional resources that have been helpful to them. So, I'd say social media complements my formal learning resources. [Fany, 27 Sept 2023]

In excerpts 1, 2 and 3, the students explain their approach to selecting digital resources for their learning, emphasising the importance of aligning these resources with their specific learning goals and personal preferences. They also mention the role of online communities and social media in discovering additional resources and support. However, some students mentioned experiencing a loss of focus when scrolling through social media. They initially intended to search for something beneficial for their learning, but they often got distracted and ended up focusing on content displayed on their social media feeds instead.

Unpicking this statement, there are several parts to this process. First, the students verify the information with something they know to be correct. Secondly, they research presenters online and finally look for affiliation with other trusted parties before deciding that this is a legitimate source. Students can personalise their language learning experiences by selecting resources that align with their interests and needs; the real-world context of learning and interactive platforms enhances learner interest and enjoyment (Lee & Lee, 2021; Lee, 2019).

Interactions Among Students in IDLE

Digital resources are utilised in interactions among students in an informal digital learning environment (IDLE), highlighting their role in the formation of informal learning communities. In IDLE, digital resources are at the heart of the collaborative learning experience. Students use a variety of tools like messaging apps, discussion forums, and shared documents. For instance, when students share the same interest, they often create a discussion forum to make friends or to play online games. This allows them to collaborate in real time, take part and enjoy the discussion, and leave feedback comments (Lee & Lee, 2021; Lee & Sylvén, 2021; Wenger, 2000).

Digital resources are incredibly convenient for facilitating learning. In Molly's case, she can communicate and work together with others regardless of physical location. One of the most evident advantages of digital resources is the unparalleled convenience they offer to students. Through online platforms and e learning materials, learners can access a wealth of educational content from the comfort of their homes or any location with an internet connection. This accessibility not only saves valuable time that would otherwise have been spent commuting, but also allows students to tailor their learning schedules to their individual needs. This flexibility fosters a more learner-centric approach, empowering students to take charge of their learning. Furthermore, digital resources provide a diverse range of multimedia content, such as interactive simulations, videos, and virtual labs, which enhance the understanding of complex concepts. These resources enable students to engage with the material in a dynamic and interactive manner, promoting deeper comprehension and retention of knowledge.

Another remarkable outcome of the digital revolution in education is the ability for students to collaborate seamlessly, regardless of their geographical locations. Online discussion forums, video conferencing tools, and collaborative software have become essential components of modern education. These tools not only bridge the gap between students and instructors but also enable peer-to-peer

collaboration on assignments, projects, and research. The asynchronous nature of digital communication allows students to engage in meaningful discussions and teamwork without the constraints of time zones or physical proximity. This has been particularly beneficial in fostering a global perspective and promoting cross-cultural exchanges among students from diverse backgrounds. Furthermore, collaborative tools have proven invaluable in group projects, where students can contribute their expertise and insight without being hindered by geographical limitations.

On the flip side, the ease of access to social media platforms, regardless of privacy settings, can lead to privacy issues. Students shared their experiences of strangers contacting them privately outside of group discussion forums. Consequently, students are advised to protect their own privacy by refraining from oversharing personal information. This not only enriches the quality of work but also prepares students for the globalised workforce, where virtual collaboration is increasingly commonplace. Despite the numerous advantages of digital resources, it is crucial to acknowledge the challenges and considerations that come with this transformation. Issues such as the digital divide and the potential for information overload must be addressed to ensure equitable access and effective utilisation of these resources.

Autonomous learning is a central concept in informal digital learning of English (IDLE). This refers to learners taking control of their own learning process, making decisions about what, when, and how they learn, and actively managing their language acquisition independently. Bella, Molly, Fany and Ally's cases demonstrate how informal learning communities provide a sense of belonging and motivation – the feeling of experiencing the same learning journey where other users are ready to assist and encourage them. In the context of IDLE, autonomous learning is particularly relevant and can manifest in several ways (Cole & Vanderplank, 2016; Lai, 2017), underpinned by Benson's (2011) concept of L2 learning beyond the classroom.

In conclusion, the digital era has undeniably revolutionised the way students learn and collaborate. The convenience and flexibility offered by digital resources have made education more accessible and adaptable to individual needs. Additionally, the ability to collaborate across physical boundaries has enriched the educational experience, preparing students for the interconnected world they will encounter in their future careers. However, it is imperative for educators and institutions to remain vigilant in addressing the associated challenges to ensure that the benefits of digital resources are accessible to all. The resources support not only student learning, but also encourage active participation and knowledge-sharing to prepare students to be autonomous learners.

Ownership of Learning Process

Informal digital learning of English has witnessed a surge in popularity due to the vast array of valuable materials accessible to learners. These materials play a pivotal role in shaping effective language acquisition strategies and empowering learners in a dynamic, self-directed learning environment. Online language learning platforms have emerged as valuable resources for learners of

English. These platforms offer structured lessons, interactive exercises, and assessments that cater to learners of different proficiency levels. Platforms such as Duolingo, Yubo, and Cake provide engaging and gamified approaches to language learning. They enable learners to progress at their own pace and track their language proficiency over time.

Educational websites and blogs, curated by language experts, educators, and enthusiasts, offer an abundance of valuable materials. These resources often include grammar guides, vocabulary lists, and articles on various aspects of the English language. Websites like BBC Learning English provide free access to high-quality content that can supplement learners' informal learning journeys. YouTube has emerged as a goldmine of English language learning materials. Numerous channels dedicated to teaching English, such as English with Lucy and Learn English with Let's Talk – Free English Lessons, offer video tutorials on pronunciation, grammar, and conversational skills. These videos not only make learning more engaging but also provide visual and auditory cues for improved comprehension (Soyoof et al., 2021; Tan, 2013).

Language exchange platforms like Yubo enable students to connect with native speakers for conversational practice. These apps facilitate real-time communication through text, voice messages, and video calls, allowing learners to gain practical language skills and cultural insights. The peer-to-peer interactions on these platforms contribute to authentic language-learning experiences. Downes (2010) highlights how social networking sites as informal learning environments and online communities create spaces for language learners to connect, share resources, and practise English. Dedicated to English language learners, these provide opportunities for peer support, language challenges, and resource sharing, fostering a sense of community and motivation among learners.

In summary, the informal digital learning of English is enriched by the plethora of valuable materials available to students. These materials, spanning online platforms, educational websites, multimedia resources, and interactive communities, empower learners to take control of their language acquisition process (Reinders & Benson, 2017; Sockett, 2014). By leveraging these resources effectively, learners can tailor their learning experiences, practise essential skills, and progress towards fluency in English at their own pace. At the same time, being mindful of the importance of privacy protection in our interconnected world, students should consider security concerns.

CONCLUSION

This study explores the motivations driving students to participate in IDLE, which include self-regulation, self-motivation, personalised learning, and the desire for real-world language application. Additionally, the study underscores the need for greater support and guidance for independent online learners, including strategies to help them to navigate the vast landscape of digital resources and develop critical digital literacy skills. In conclusion, it sheds light on the dynamic and evolving landscape of informal digital learning of English among independent online learners. It emphasises the potential of IDLE as a valuable supplement to formal language education and calls for a more

comprehensive understanding of how students can effectively utilise digital resources to enhance their language proficiency and cultural competence in today's interconnected world.

To fully harness the potential of IDLE, it is essential to integrate it into the Indonesian EFL curriculum. This integration requires a rethinking of pedagogical practices, incorporating digital technologies and informal learning environments into classroom activities. Educators can leverage IDLE to create meaningful and authentic language-learning experiences, to promote learner engagement and motivation, and to foster sociocultural interactions. However, careful consideration must be given to addressing issues of access, digital literacy, and ensuring the alignment of IDLE practices with educational goals and objectives.

IDLE promotes students' autonomy, which assists them in setting their learning objectives and goals. They identify what they want to achieve in terms of language proficiency, whether that is improving conversational skills, expanding vocabulary, or enhancing reading comprehension. Learners engaged in IDLE have the flexibility to create their own learning schedules. They decide when and how often they engage with digital resources, adapting to their own availability and preferences. Autonomous learners often engage in self-paced learning, progressing through materials at their own speed. They can revisit content as necessary to reinforce their understanding. IDLE allows learners to experiment with different learning strategies, such as language exchange partners, watching videos, or participating in online language communities. Autonomous learners can identify which strategies work best for them.

With the help of IDLE, students frequently engage in reflective practice, assessing their own progress and making adjustments to their learning strategies when necessary. They may keep journals, track their vocabulary growth, or evaluate their language skills regularly. When learners encounter challenges or language barriers in IDLE, autonomous learning motivates them to actively seek solutions. This might include looking up unfamiliar words, asking questions on online forums, or seeking help from native speakers. Ultimately, autonomous learners in IDLE take ownership of their learning journey. They are responsible for their successes and failures and have a sense of agency in their language acquisition efforts. It is important to note that while autonomous learning is a valuable approach to IDLE, it may not suit every learner equally. Some individuals may thrive in more structured learning environments, while others excel in autonomous settings while addressing privacy concerns. Effective language learning often involves a combination of both formal and informal approaches, allowing learners to benefit from a variety of experiences and resources.

ACKNOWLEDGMENTS

The research presented in this manuscript is a result of a research grant provided by Kemenristekdikti (the Indonesian Ministry of Research, Technology, and Higher Education) under the Early-Career Faculty Research scheme (Penelitian Dosen Pemula). We are grateful for their support and funding, which made this research possible.

REFERENCES

- Benson, P., & Reinders, H. (eds.). (2011). *Beyond the language classroom* (pp. 7–16). New York: Palgrave Macmillan.
<https://doi.org/10.1057/%209780230306790>
- Bin-Hady, W. R. A., & Al-Tamimi, N. O. M. (2021). The use of technology in informal English language learning: evidence from Yemeni undergraduate students. *Learning and Teaching in Higher Education: Gulf Perspectives*, 17(2), 107-120. <https://doi.org/10.1108/LTHE-09-2020-0037>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
<https://doi.org/10.1191/1478088706qp063oa>
- Cole, J., & Vanderplank, R. (2016). Comparing autonomous and class-based learners in Brazil: Evidence for the present-day advantages of informal, out-of-class learning. *System*, 61, 31-42.
<https://doi.org/10.1016/j.system.2016.07.007>
- Downes, S. (2010). New technology supporting informal learning. *Journal of emerging technologies in web intelligence*, 2(1), 27-33.
<http://www.jetwi.us/index.php?m=content&c=index&a=show&catid=163&id=948>
- Gao, X. (2009). The ‘English corner’ as an out-of-class learning activity. *ELT journal*, 63(1), 60-67. <https://doi.org/10.1093/elt/ccn013>
- John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: A Vygotskian framework. *Educational psychologist*, 31(3-4), 191-206. <https://doi.org/10.1080/00461520.1996.9653266>
- Ivankova, N. V., & Creswell, J. (2009). Mixed methods. In *Qualitative Research in Applied Linguistics: A Practical Introduction* (pp. 135-161). Palgrave Macmillan. <https://doi.org/10.1057/9780230239517>
- Lai, C. (2017). *Autonomous language learning with technology: Beyond the classroom*. New York: Bloomsbury, 1-240.
- Lai, C., Zhu, W., & Gong, G. (2015). Understanding the quality of out-of-class English learning. *TESOL Quarterly*, 49, 278–308.
<https://www.jstor.org/stable/i40160075>
- Lamb, M. (2007). The impact of school on EFL learning motivation: An Indonesian case study. *TESOL Quarterly*, 41(4), 757-780.
<https://doi.org/10.1002/j.1545-7249.2007.tb00102.x>
- 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.
<https://doi.org/10.1111/bjet.12599>

- Lee, J. S. (2020). Informal digital learning of English and strategic competence for cross-cultural communication: Perception of varieties of English as a mediator. *ReCALL*, 32(1), 47–62. <https://doi.org/10.1017/S0958344019000181>
- Lee, J. S., & Dressman, M. (2017). When IDLE hands make an English workshop: Informal digital learning of English and language proficiency. *TESOL Quarterly*, 52, 435-445. <https://doi.org/10.1002/tesq.422>
- Lee, J. S., & Lee, K. (2021). The role of informal digital learning of English and L2 motivational self system in foreign language enjoyment. *British Journal of Educational Technology*, 52(1), 358-373. <https://doi.org/10.1111/bjet.12955>
- Lee, J. S., & Sylvén, L. K. (2021). The role of Informal Digital Learning of English in Korean and Swedish EFL learners' communication behaviour. *British Journal of Educational Technology*, 52(3), 1279-1296. <https://doi.org/10.1111/bjet.13082>
- Reinders, H. & Benson, P. (2017). Research agenda: Language learning beyond the classroom. *Language Teaching*, 50(4), 561–578. <https://doi.org/10.1017/S0261444817000192>
- Sockett, G. (2014). *The online informal learning of English*. Basingstoke: Palgrave Macmillan. <https://link.springer.com/book/10.1057/9781137414885>
- Soyoof, A., Reynolds, B. L., Vazquez-Calvo, B., & McLay, K. (2023). Informal digital learning of English (IDLE): A scoping review of what has been done and a look towards what is to come. *Computer Assisted Language Learning*, 36(4), 608-640. <https://doi.org/10.1080/09588221.2021.1936562>
- Sukirman & Kabilan, M. K (2023) Indonesian researchers' scholarly publishing: an activity theory perspective, *Higher Education Research & Development*, <https://doi.org/10.1080/07294360.2023.2209522>
- Sundqvist, P., & Sylvén, L. K. (2016). *Extramural English in teaching and learning: From theory and research to practice*. London: Palgrave Macmillan. <https://doi.org/10.1057/978-1-137-46048-6>
- Sung, Y.-T., Chang, K.-E., & Yang, J.-M. (2015). How effective are mobile devices for language learning? A meta-analysis. *Educational Research Review*, 16, 68–84. <https://doi.org/10.1016/j.edurev.2015.09.001>
- Tan, E. (2013). Informal learning on YouTube: Exploring digital literacy in independent online learning. *Learning, media and technology*, 38(4), 463-477. <https://doi.org/10.1080/17439884.2013.783594>
- Timothy, T., Chee, T. S., Beng, L. C., Sing, C. C., Ling, K. J. H., Li, C. W., & Mun, C. H. (2010). The self-directed learning with technology scale (SDLTS) for young students: An initial development and validation.

Computers & Education, 55(4), 1764-1771.
<https://doi.org/10.1016/j.compedu.2010.08.001>

Toffoli, D., & Sockett, G. (2015). University teachers' perceptions of online informal learning of English (OILE). *Computer Assisted Language Learning*, 28(1), 7-21. <https://doi.org/10.1080/09588221.2013.776970>

Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225–46. <https://doi.org/10.1177/135050840072002>

Zhang, D., Zhang, L.J. (2019). Metacognition and Self-Regulated Learning (SRL) in Second/Foreign Language Teaching. In: Gao, X. (eds) *Second Handbook of English Language Teaching*. Springer International Handbooks of Education. Springer, Cham. https://doi.org/10.1007/978-3-030-02899-2_47

Zhang, R., Zou, D., Cheng, G., Xie, H., Wang, F. L., & Au, O. T. S. (2021). Target languages, types of activities, engagement, and effectiveness of extramural language learning. *PloS one*, 16(6), e0253431. <https://doi.org/10.1371/journal.pone.0253431>