

Supporting Self-Regulated Learning Through Digital Tools in Adult ESL

Volha Hurskaya ¹

¹ M.Ed, ESL instructor and researcher in technology-enhanced language education, San Diego University for Integrative Studies, USA

✉ Corresponding author:

teychonok@gmail.com



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ABSTRACT: Digital tools can help adult learners in English as a Second Language (ESL) to manage their own learning. This paper reviews recent research on self-regulated learning (SRL) and digital language tools. We propose a methodological framework that integrates technology to support SRL for adult ESL students. Key components include needs analysis, strategy instruction, and feedback via digital platforms (see Table 2). Table 1 presents examples of tools (e.g., mobile apps, video platforms) linked to SRL skills. The study highlights that technology can boost motivation, practice, and reflection in adult learning contexts. Future research should test and refine the framework and explore new tools, such as AI-driven tutors.

KEYWORDS: self-regulated learning; digital tools; adult education; ESL; mobile learning

How to cite: Hurskaya V. (2026). Supporting Self-Regulated Learning Through Digital Tools in Adult ESL. *International Multidisciplinary Conference on Innovation, Technology and Sustainability*. Futurity Research Publishing. <https://doi.org/10.5281/zenodo.18926124>

Introduction

Adult learners often balance jobs, family, and study, so they need to manage their learning well. Technology and digital platforms have become central in ESL education, especially after the pandemic. Online learning requires students to work more independently. Many studies report high dropout rates in online language courses due to learners' limited self-regulatory skills (Yu, 2023). Adult ESL learners may have had few positive schooling experiences and face many barriers (e.g., work hours, transportation, digital access) that can make learning hard. In this digital era, SRL skills such as planning, monitoring, and staying motivated are essential for success. For example, Yu (2023) argues that online platforms can track learners' activity and give feedback to support SRL. Digital tools offer new ways to engage adult learners, but courses must be designed to scaffold SRL. This paper examines recent research on SRL and digital tools in ESL and proposes methodological support for adult learners.

Research Aim and Research Questions.

Recent studies show that technology can stimulate SRL in language learning. Herwiana et al. (2025) systematically reviewed ICT tools for language learning and found that most studies reported positive outcomes, including better proficiency, greater motivation, richer learning experiences, and stronger strategies. They note that technology can boost metacognitive and cognitive strategies and motivation. For example, using YouTube for English learning helps build motivation and cultural knowledge. Yu (2023) emphasises that SRL is a key factor in effective online language learning, as platforms can record learning traces and provide feedback.

Research on specific tools confirms these benefits. Almayez et al. (2025) surveyed Saudi EFL learners and found that Duolingo was the most widely used app, covering all language skills. They also found strong positive links among learners' motivation, SRL strategies, and self-efficacy. An et al. (2021) studied Chinese university students and found that technology-based vocabulary-learning strategies were positively associated with English-learning outcomes. Their work suggests that teaching should focus on building motivation and strategic awareness for the use of technology.

Mobile-assisted language learning (MALL) is growing in popularity. Julia and Jeyanthi (2025) highlight that MALL offers flexible, interactive, personalised learning that can improve reading, writing, listening, and speaking in adult ESL. They note that mobile learning is an indispensable tool for ESL literacy. Mobile apps allow learners to practice anywhere and can increase engagement (Table 1). For example, Kimsesiz (2023) found that most adult EFL learners use smartphones or tablets for English study, but their usage was low. Learners need well-organised, self-directed practice with these tools. Enhancing self-directed use of mobile technology is crucial to maximising learning gains.

Systematic literature reviews offer insights into research trends. Mazandarani (2024) reviewed SRL studies in ESL/EFL (2017–2022) and found that most studies are quantitative and university-based, with surveys as the primary method. She also noted growing interest in writing skills. Faza and Lestari (2025)

synthesised research on SRL strategies, technologies, benefits, and barriers in digital learning. They conclude that SRL fosters lifelong learning and job readiness, and that research should inform the integration of technology support for SRL.

These studies illustrate that digital tools can enhance SRL. Common findings include: goal-setting prompts and reminders in apps (e.g., Duolingo encourages daily goals); flashcard and quiz features that support self-testing (e.g., Quizlet); and e-portfolios or blogs that encourage reflection. Technology can also improve motivation through gamification and choice. Social features (discussion forums, video chats) allow co-regulation and peer feedback. For example, collaborative tools like Google Classroom or Teams let learners share goals and strategies with peers.

Recent work also explores AI and chatbots. Huang and Zhang (2026) extend SRL theory to AI contexts, finding that mobile SRL is associated with learners' awareness of generative AI tools. Jalambo et al. (2025) showed that integrating AI chatbots for vocabulary learning led EFL students to gain more words and collocations and feel less boredom. Students reported higher autonomy and motivation, enjoying interactive, personalised practice beyond class. This suggests that AI-driven tools can create engaging, self-regulated learning environments.

Overall, the literature indicates that technology-enhanced SRL is promising for adult ESL. Research across contexts shows that tools can scaffold planning, practice, and reflection, and that motivation and self-efficacy improve when SRL is supported. Authors such as Kay et al. (2022) also propose design ideas (open learner models) that enable students to monitor and plan their own learning, thereby reinforcing SRL. In summary, recent studies (2020–2025) highlight both the potential of digital tools and the need for intentional design to develop adult learners' SRL.

Building on this literature, we propose a theoretical and methodological framework to support SRL through digital tools in adult ESL education. We aim to identify key components of effective design and illustrate them in a framework. By integrating insights from recent research, we intend to guide educators in choosing and using digital tools that foster autonomous learning. The framework will highlight which SRL strategies to teach, how to select tools, and how to organise learning to empower adult ESL learners.

Research Results.

Drawing on the review, we present a framework for practice. It has several components (Table 2) that align with adult ESL needs and SRL principles. For example, Kimsesiz (2023) found that learners need well-organised digital learning practices. Therefore, our framework begins with a Needs Analysis that surveys learners' goals, SRL skills, and tech access. Next, Curriculum Integration ensures that digital tasks align with learning objectives. We suggest explicit Strategy Instruction to teach goal-setting and planning skills. Learners should also receive training on the digital tools themselves. In Practice & Support, students use tools (apps, websites) in guided activities. Teachers give feedback and encourage reflection in tools like e-portfolios. Finally, Assessment & Reflection evaluates both language gains and SRL

development.

Table 1 lists examples of digital tools and their support for SRL strategies. Mobile apps (e.g., Duolingo) let learners set goals and get feedback. Video platforms (e.g., YouTube) provide authentic content that boosts motivation. Flashcard/quiz apps (e.g., Quizlet) enable self-testing and repetition. E-portfolios or blogs encourage learners to reflect on their progress. AI chatbots give conversational practice and personalised help, fostering autonomy.

Table 1

Examples of digital tools and the SRL aspects they support in adult ESL contexts.

Digital Tool/Platform	SRL Dimension Supported	Description / Benefit
Mobile Apps (e.g., Duolingo)	Motivation, goal-setting, feedback	Apps like Duolingo cover listening, speaking, reading, and writing and allow learners to set daily goals. Immediate feedback and gamified points keep learners engaged.
Video Platforms (e.g., YouTube)	Cultural context, motivation	Educational videos immerse learners in authentic language and culture, boosting motivation and engagement. High interest keeps learners practicing.
Flashcards & Quiz Apps (e.g., Quizlet)	Practice & self-testing	Digital flashcards and quizzes enable repeated practice of vocabulary and self-assessment. Learners identify gaps and review to improve recall.
E-Portfolios / Blogs	Reflection, metacognition	Learners maintain digital portfolios or journals to document progress, reflect on goals, and plan future study. This keeps them aware of learning strategies and progress.
Chatbots / Virtual Tutors	Conversation practice, autonomy	AI chatbots or tutors offer interactive speaking practice and hints, giving personalized practice. They enable self-paced dialog practice, boosting autonomy and confidence.

Source: author’s own development

Table 2 outlines the framework components and tools. It emphasises that learners and instructors work together: teachers design the SRL-supportive activities, and learners engage in self-monitoring and reflection using technology. This framework is preliminary and should be tested in real ESL programs.

Table 2

Proposed framework components and suggested tools/methods.

Framework Component	Purpose / Approach	Example Tools / Methods
Needs Analysis	Identify learners' SRL skill gaps and tech access	Surveys, interviews with adult learners
Curriculum Integration	Align digital tasks with learning goals	Multimedia lesson plans, LMS activities
Strategy Instruction	Teach SRL strategies (e.g., planning, monitoring).	Workshops or lessons on goal-setting and time management
Digital Tool Training	Ensure learners know how to use the chosen tools	Guided tutorials on apps/websites
Guided Practice & Support	Provide scaffolded learning activities	Blended lessons, scaffolded exercises, and peer collaboration
Feedback & Reflection	Offer feedback and encourage self-assessment	Online quizzes with instant feedback, reflective journals
Assessment & Evaluation	Measure language outcomes and SRL development	Pre/post-tests, self-report SRL scales, portfolio review

Source: author(s) own development.

Conclusions

This paper underscores that digital tools can powerfully support self-regulated learning in adult ESL. By reviewing recent research, we see that technology (apps, videos, AI) can enhance motivation, practice, feedback, and reflection. We propose a methodological framework (Table 2) that guides educators in incorporating such tools: it begins with assessing learner needs and ends with reflecting on outcomes. Two illustrative tables demonstrate how tools link to SRL (Table 1) and outline the framework steps (Table 2). The significance of this study lies in bridging theory and practice: it offers a concrete design for empowering adult ESL learners. Future research should implement and evaluate this framework. For example, empirical studies could test which combinations of tools and strategies best improve adult learners' autonomy and language proficiency. Also, as new technologies emerge (such as more advanced AI tutors), their roles in SRL should be explored. Overall, supporting learner autonomy through well-chosen digital tools has promise to improve outcomes in adult language education.

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