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Advancing Self-Directed Learning in the Saudi EFL Higher Education: A Call to Further Action

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Abstract. This paper emphasized the role of self-directed learning in promoting autonomy, academic success, and crucial lifelong learning skills. However, a persistent challenge in many Saudi EFL contexts is the reliance on teaching practices that fail to promote learners' autonomous learning. This reliance may impede effective language acquisition and promote surface-level learning. Therefore, the paper called for further integration of self-directed learning principles within the unique framework of EFL higher education in Saudi Arabia. The aim was to empower Saudi EFL students with life-long skills to independently navigate their language acquisition journey and promote their academic independence. Through an extensive review of the literature, the paper illustrated the transformative role of SDL in equipping students with the essential competencies required for academic success in a globally connected world. It specifically investigated key literature, theoretical frameworks, and empirical studies to synthesize insights on the potential benefits and challenges of integrating self-directed learning strategies in Saudi EFL settings. The review yielded clear insights into the influence of SDL on language acquisition, addressing its integration with technology, relevance in higher education, and considerations of learner readiness and their pragmatic attitude towards SDL. Practical recommendations were embedded within the discussion of these facets and elaborated upon towards the end. The paper ended by discussing in detail the potential implications for teachers and policymakers in Saudi EFL higher education, emphasizing the importance of nurturing self-directed learning as a fundamental force toward promoting academic independence and adequately preparing students for the evolving demands of a globalized society.

Keywords: autonomous language learning; collaborative learning; EFL higher education; self-directed learning (SDL); technology integration

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1. Introduction

In the field of English language education, the integration of autonomous learning principles has become a transformative force in reshaping traditional pedagogical approaches. This indicates that students should be given more freedom to learn on their own, beyond the confines of traditional classrooms. Teachers are now aware of the need for students to learn how to use the language by themselves (Saxena, 2013). This approach goes beyond the mere acquisition of linguistic proficiency, encompassing a multifaceted approach that nurtures lifelong learning skills and fosters global competence (Morris, 2019). It encourages community engagement, allows students to evaluate their learning, and enables them to improve their self-confidence, autonomy, and motivation (Demir, 2015; O'Shea, 2003; Spencer & Jordan, 1999).

English language teaching and learning in Saudi Arabia is exclusively important because of the country's unique status in the world of economy and international communication. Today, Saudi Arabia is focusing more on mastering English as an important skill for school, higher education, work, and global communication. Encouraging self-directed learning in Saudi EFL education fits with the global trends in language teaching and learning. Besides traditional classrooms, Saudi students, like others worldwide, use various tools such as social media, the internet, and interactive technology.

Furthermore, the vision 2030 is a comprehensive plan to transform the nation, highlighting education as the key to building a knowledge-based economy. In this vision, English proficiency is crucial for Saudis to engage effectively in the global economy and international collaborations. The integration of autonomous learning principles aligns with the vision's emphasis on developing individuals who are not just proficient in English but are also equipped with the skills to independently adapt to the evolving language demands.

However, in many Saudi EFL higher education settings, a persistent challenge is claimed to be EFL teachers' reliance on traditional teaching practices that fail to promote learners' control over their own learning (Alharbi, 2022; Al-Seghayer, 2014, 2021). This can hamper autonomous and effective language learning and encourage a shallow understanding of the complexities of active learning. The use of self-directed learning is a practical remedy that needs to be promoted among university students. Saudi EFL students need to be actively guided in their educational endeavors to utilize self-directed learning skills. This is because SDL can surmount the constraints associated with passive methodologies, developing a more dynamic and participatory language learning environment (Egel, 2009; Sembiring et al., 2023).

2. Significance of the Study

This study delves into how self-directed learning principles can be expanded upon in teaching English in Saudi Arabian universities. It covers the foundational aspects of SDL principles and explores how they can be encouraged and put into practice to

improve the language learning experiences of Saudi EFL students. Language education has evolved in the last decades, and integrating autonomous learning principles has become a necessity (Ciekanski, 2007; Egel, 2009; Sakai et al., 2010). This academic exploration adds to the ongoing discussion about effective teaching methods in EFL education, offering insights into the potential transformative impact of self-directed learning principles in the Saudi EFL context.

3. Methodology

3.1 Research Design

The research used a general review design to explore the potential benefits and challenges of integrating self-directed learning strategies in Saudi EFL educational settings. This design involved thorough examination and synthesis of existing literature, theoretical frameworks, and empirical studies relevant to SDL in language learning contexts.

3.2 Scope and Process of Data Collection

Data collection involved a comprehensive search across various academic databases, journals, and relevant sources. The process included a structured search strategy using specific keywords and inclusion criteria to ensure the selection of relevant and high-quality sources.

3.3 Data Analysis

The data analysis process focused on synthesizing insights from the collected literature. Specifically, it involved examining key findings, themes, and arguments within the literature to identify the potential benefits and challenges associated with integrating SDL principles. The analysis was guided by an iterative approach, whereby key concepts and patterns were identified and refined through ongoing review and discussion. The analysis specifically investigated the alignment between SDL principles and the context of Saudi EFL education. It synthesized insights on the effectiveness of various SDL strategies, instructional approaches, and technology integration in promoting learner autonomy and language proficiency.

4. Review of Literature

This review thoroughly examines self-directed learning, focusing on its potential role in teaching and learning English in Saudi Arabia. It examines how self-directed learning can enhance students' language proficiency and foster independence in learning. Recognizing the significance of SDL can also assist teachers enhance language instruction in their respective classes. Moreover, incorporating self-directed learning into Saudi EFL education can also make language learning more effective for students. What follows is a detailed description of the key themes used in this review to explain the importance of further integration of SDL strategies into the Saudi EFL educational settings.

4.1 What is Self-Directed Learning?

Self-directed learning (SDL) includes a comprehensive range of skills to enable individuals to take control of their own learning endeavors. Researchers like Cheng et al. (2010), Loyens et al. (2008), and Robertson (2011) claimed that these skills are important manifestations of SDL skills. These skills include knowing what you need to learn, recognizing where you need to improve, and setting your own learning goals (Fatemeh et al., 2016; Karatas & Arpaci, 2021). Also, SDL requires the ability to spot problems in language learning and adapt to changes in various learning environments (Bolhuis, 2003; Morris, 2019). Planning how to cope with these challenges and finding the right learning tools are also important parts of SDL skills (Knowles et al., 2015). Further, SDL involves evaluating learning efforts, recognizing what to learn next, and being flexible to change your plans based on these evaluations (Jossberger et al., 2010).

Becoming proficient in self-directed learning is a gradual journey for students. It means developing skills to understand what a learning task needs, carefully evaluating their own knowledge and abilities, making clear plans to reach their learning goals, keeping track of how they are doing, adjusting their strategies based on feedback, and changing their overall approach to learning when necessary (Ambrose et al., 2010).

Moreover, self-directed learning is not only about having a list of skills but also involves broader qualities like attitudes and personality traits that help individuals be successful and sustain lifelong skills (Fisher & King, 2010). This broad perspective acknowledges that successful self-directed learners not only have the technical skills needed for independent learning but also have inner motivation, resilience against challenges and setbacks, and curiosity to explore new topics, ask questions, and seek out knowledge. These personal traits encourage them to take responsibility for their learning (Guglielmino, 2008; Merriam, 2018). It's also about having the right mindset and personal qualities to keep learning throughout life and adjust to new situations (Morris, 2019).

In SDL development, using metacognitive abilities is crucial. Individuals who have metacognitive abilities are aware of and can understand their thought processes. In the context of SDL, it is the ability to reflect on and regulate one's own learning. This includes the capacity to monitor one's comprehension, assess the effectiveness of learning strategies, and make adjustments accordingly (Marra, et al., 2021). Intrinsic motivation is another key factor in keeping long-term learning efforts and having a genuine passion for gaining knowledge (Little, 1991; Spratt et al., 2002). Individuals engaged in SDL are not just driven by external pressures or deadlines. Rather, they find value and joy in the learning process itself. Moreover, it's important not to overlook the social part of self-directed learning. Though SDL emphasizes independence, it doesn't mean learning alone. Working together with classmates, sharing ideas, getting advice, and making connections with resources and mentors all make learning engaging rather than passive (Jacobs & Tan, 2015; Robertson, 2011).

In essence, SDL is a flexible and comprehensive way of learning that includes different skills, attitudes, thinking abilities, inner drive, and social interactions. It allows individuals to develop a mindset for learning throughout life, adaptability, and a true passion for always growing intellectually (Loeng, 2020).

4.2 The Role of SDL in Higher Education

In the last decades, SDL has been an important factor that helps enhance university students' academic performance, learning motivation, and other necessary skills. In terms of academic performance, SDL has been found to considerably improve students' academic performance (Anderson, 1993; Bodkyn & Stevens, 2015; Harriman, 1990; Khalid et al., 2020; Khiat, 2017; Long & Morris, 1996; Oducado, 2021). Anderson (1993) and Harriman (1990) found that students who were prepared for self-directed learning did better academically. Long and Morris (1996) found a similar link between readiness for self-directed learning and academic performance in different settings. Mariano and Batchelor's (2018) study supported this correlation, showing that self-directed learners are better at learning and remembering well, and they often look for more information than what is taught in traditional classes.

In self-directed learning, EFL students can take responsibility for participating in different aspects of language learning. They may perform tasks such as finding information, and planning, and have the opportunity to evaluate their performance (Demir, 2015). The flexibility intrinsic to SDL empowers students to make informed decisions regarding the timing, methodology, and content with which they engage (Milligan & Littlejohn, 2014). This autonomy mandates meticulous monitoring and adjustment of behavior and actions in alignment with the specific learning context (Zimmerman, 2000). With self-directed learning, students do not rely as much on teachers. They see it as their responsibility to learn and use the language. Further, using active self-directed learning enhances university students' involvement and improves overall learning outcomes and performance (Freeman et al., 2014; Yilmaz, 2016).

However, various related factors significantly influence language teaching and learning practices in Saudi EFL higher education. Traditional teaching methods, emphasizing rote learning and teacher-centered classrooms, are deeply rooted in many EFL contexts including the Saudi educational settings (Alkubaidi, 2014; Almutairi, 2008; Alrashidi & Phan, 2015; Mohammad & Hazarika, 2016). However, the cultural attitudes toward education in various EFL contexts, characterized by respect for authority and hierarchy, can be regarded as a positive aspect fostering discipline and reverence for knowledge. While these attitudes may pose initial challenges to adopting self-directed learning approaches, they also provide a solid foundation for students to value structure and guidance in their educational journey.

4.3. Students' Psychological Inclination

Researchers have emphasized that individuals' attitudes and feelings about learning independently are important. They believed that psychological traits like attitudes, values, and abilities are key in deciding if students are willing to start learning on their own (Guglielmino, 2008; Merriam, 2018; Merriam & Caffarella, 1999). Guglielmino (2008) argued that these traits drive people to learn independently, even in the absence of external guidance. However, Knowles et al. (2015) mentioned that adults mostly want to pursue self-directed learning because they choose to, while still being responsive to external motivators. Additionally, Bouchard (1996) pointed out that feeling psychologically in control can boost individuals' motivation to learn, even if they have no choice about using particular learning methods.

This leads to what Chou and Chen (2008) explained as the key characteristics of SDL learners. Firstly, they stressed independence, describing SDL learners as responsible individuals who can plan, execute, analyze, and evaluate their learning tasks on their own. Secondly, they highlighted self-management, showing SDL learners are skillful at recognizing their learning needs, setting goals, managing their time well, and rethinking what they have learned. Thirdly, they indicated that SDL learners have a strong motivation to learn, highlighting their desire to expand their knowledge base. Lastly, they emphasized that SDL learners are adept at solving problems and that they can handle their learning and use resources carefully to overcome challenges.

However, Turner (2007) argued that there seems to be a difference between learners' psychological tendencies about SDL and their aptitude to engage in autonomous learning. This difference often arises in the context of EFL education, where students are expected to independently accomplish academic tasks without anticipating guidance which can evoke a sense of anxiety and a feeling of unease. Turner's perspective shows that even though learners might have the psychological readiness to learn on their own, they may still struggle with the cognitive demands of autonomy. This indicates how important it is to understand what helps students do well in self-directed learning in English classes and find proper strategies to help them embrace it better (Jennett, 1992).

EFL educators can effectively use SDL principles by fostering a gradual shift to autonomous learning within the Saudi EFL context. First, the transition requires scaffolding and gradually releasing responsibility. Educators can provide planned support progressively while reducing their guidance as learners have better opportunities to gain confidence (Wang, 2020). Pragmatic aptitude for autonomous learning via this approach can increase while taking into account the degree of their psychological readiness for language learning. Secondly, learners' aptitude to perform their tasks to a satisfactory conclusion can be effectively increased through the incorporation of technology. Technological tools can work as an efficient agent to employ self-directed learning (Bullock, 2013). EFL teachers can empower their students to better explore independent learning domains by using online platforms, language learning applications, and multimedia resources (Karatas & Arpaci, 2021).

Lastly, these resources can be tailored to the Saudi cultural context to better meet learners' interests and needs.

To support a positive attitude toward autonomous learning, it's also helpful to include collaborative learning activities in the curriculum. Group projects, peer collaboration, and language learning communities provide chances to exchange ideas, share resources, and address the challenges students encounter during autonomous learning (Jacobs & Tan, 2015; Loeng, 2020). In addition, a growth mindset shift in EFL is important for learners to succeed in self-directed learning. Directly teaching metacognitive strategies can aid in this endeavor. As Marra et al. (2021) pointed out, language teachers can be instrumental in assisting EFL learners to achieve self-management skills, set goals, and reflect on their own learning.

4.4 SDL and Technology Integration

In modern higher education environments, the majority of college students are digitally oriented, meaning they are very comfortable with technology (Karatas & Arpaci, 2021; Prensky, 2001; Richards, 2015). However, the integration of learning technologies within the traditional class teaching framework represents a developing instructional paradigm for both university instructors and students. How well this mix of old and new teaching methods works for learning is an area of ongoing exploration, with predictors of learning effectiveness remaining elusive and necessitating further investigation (Hao, 2016). Thornton and Sharples (2005) found that adults learning a foreign language on their own exhibited proficient use of technology to help them optimize their learning. Further, they pointed out that those adults are skilled at managing their time, learning more efficiently, accessing learning materials quickly, improving their language skills like reading and writing, and easily combining learning with entertainment.

Richards (2015) emphasized that easy access to the internet and various technological devices enables students to have access to a massive collection of educational materials, apps, and language learning programs. Thus, extraordinary opportunities to improve language skills are available inside and outside the classroom settings. However, more research needs to address the challenge that could arise from the combination of digital and traditional methods in order to facilitate comprehension and achieve desired learning outcomes (Hao, 2016). However, effectively integrating technology requires a structured and carefully planned approach, taking into account the digital literacy skills of learners.

Understanding that self-directed learning is a dynamic and intricate process, it surpasses the mere acquisition of specific skills (Imjai et al., 2024). When executed effectively, self-directed learning can empower Saudi EFL learners to actively engage in their education by steering their own learning trajectory. Self-directed learning helps learners set goals, create plans, and evaluate their progress independently (Marra et al., 2021). While emphasizing autonomy, motivation, and self-regulation, successful implementation depends on a deep understanding of the factors that

influence learners' ability to oversee their learning journey. Knowles et al. (2015) highlighted the significance of understanding the science and practice of adult learning, particularly in environments that recognize adults' inherent self-directed tendencies.

However, the instructional paradigm adopted by educators to implement SDL is important. Teachers oriented toward a student-centered approach not only exhibit a more seamless assimilation of technology but also emphasize learning outcomes over the technological tools themselves. They also align with the principles of SDL-oriented learning curricula (Kim et al., 2013). Tondeur et al. (2017) explained that educators embracing student-centered beliefs view technology as a facilitator for their pedagogical methods. Therefore, they exhibit a greater inclination to adopt technology in ways that are in harmony with both student-centered and SDL principles. This perspective is reinforced by many studies (Kim et al., 2013; Spencer & Jordan, 1999; Tondeur et al., 2017), indicating that teachers following student-centered principles demonstrate a tendency to use technology in supporting student-centered and SDL-oriented learning frameworks. Conversely, teachers who prefer a more traditional approach are likely to use computers to support more teacher-led teaching (Ertmer et al., 2012). The connection between teaching beliefs, technology use, and self-directed learning shows how teachers' ideas about teaching affect the type of learning environment they create.

4.5 SDL and Learner Preparedness

Acknowledging the effectiveness of self-directed learning in improving language skills is essential. SDL allows language learners to customize their learning experience and focus on particular areas that need special attention (Charokar & Dulloo, 2022). This tailored methodology can empower students to define explicit objectives, participate in spoken tasks in many diverse contexts, and systematically foster self-assurance in speaking their thoughts verbally (Suratullah et al., 2023).

However, some learners may be reluctant to embrace SDL due to factors such as uncertainty about how to manage their learning independently, or a preference for traditional teacher-directed instruction. Turner (2007) observed that college students often anticipate clear guidance from instructors on task execution and scheduling which resonates with the challenges faced by EFL students as they transition to higher education.

The anticipation of clear guidance also suggests a dependence on traditional methods and highlights the gap between students' expectations and the demands of self-directed learning. Moreover, in EFL education, learners may confront uncertainties about their language abilities, resulting in frustration and a need for explicit instructions. This perceived deficiency in language proficiency can impede their capacity to manage self-directed learning tasks independently (Slater et al., 2017).

Such unreadiness serves to increase the tension and frustration experienced by students. Moreover, the developmental progression in the transition towards self-directed learning indicates that students may not be well equipped to manage this shift which can result in a state of demotivation (Turner, 2007). Therefore, EFL programs must prioritize the provision of comprehensive guidance on self-directed learning before engaging students in class activities (Knowles et al., 2015; Leatemia et al., 2016). Teaching methods should adapt to meet students' needs, particularly in facilitating independent learning. This modification will boost students' confidence in the language they are acquiring and meet their educational needs.

The researcher witnessed a notable example of the use of SDL in enhancing students' speaking skills at Jazan University's English Language Institute. Students now have a weekly task to record a one-minute speech on a specific topic independently and then send it to their instructors. Though students may read their assignments at home instead of speaking spontaneously, this exercise is valuable for building confidence and could be an important part of their language development over time. As Collis and Moonen (2012) pointed out, blended learning of this nature establishes an enriched educational setting that facilitates diverse communication modalities through the fusion of traditional face-to-face instruction with technologically enhanced learning.

5. Implications

In Saudi Arabia's EFL education at universities, it is crucial to further encourage students to learn to direct their own learning. This is important for their academic success and future career competitiveness. Just like other L2 learners, Saudi EFL students face constraints in their efforts to learn, such as language barriers, cultural differences, and lack of interest and motivation (Alhmadi, 2014; Al-Khairi, 2013; Ali et al., 2019; Al-wossabi, 2022, 2024; Fareh, 2010). For instance, Liton (2012) documented a noteworthy deficiency in both intrinsic and extrinsic motivation within Saudi EFL classes. Likewise, Fareh (2010) observed substantial difficulties encountered by teachers in Saudi Arabia, particularly in their students' aptitude, initial readiness, and motivational levels.

Developing SDL skills among Saudi EFL students should involve making them aware of such constraints and providing them with alternative perspectives to understand their academic and personal situations. Additionally, considering the societal norms and cultural context in Saudi Arabia is crucial for EFL students to acquire sensitivity and competence in social interactions (Zimmerman, 2000). Learning to manage their learning is not only beneficial for their academic success but also useful to feel content and achieve their goals (Morris, 2019). Kasworm (1983) and Sun et al. (2022) pointed out that getting better at autonomous learning is linked to improving how students engage with others and do tasks competently. Communicating with others can keep them motivated and want to learn more and evaluate what they have learned. Also, using social media can facilitate understanding and learning complex concepts and enhance skills management (Brockett & Hiemstra, 1991; Rampai, 2015).

Moreover, highlighting self-directed learning skills as important indicators of future success, as suggested by Farrington et al. (2012), highlights the lasting impact of these skills on education. Incorporating SDL abilities into the educational framework for Saudi EFL students can result in increased life satisfaction and a clearer understanding of future aspirations (Edmondson et al., 2012).

Language instructors can play an effective role in advancing pedagogical methodologies that encourage independent learning and self-directed initiatives among students (Hmelo et al., 1997). Promoting learner autonomy will facilitate the exploration of personalized learning opportunities and the creation of learning scenarios tailored to learners' needs (Merriam, 2018). It is also important to bear in mind that the advocacy for autonomy does not call for a withdrawal of support from teachers. Rather, language teachers should evolve into facilitators who actively engage in guiding and managing students' language learning processes (Shaalán, 2019). Teachers can provide timely feedback, foster a supportive learning environment, and assist students in the exploration of the domains of autonomous learning effectively (Marra, et al., 2021). However, the extent of support may vary depending on individual teachers, their teaching styles, and the specific needs of their students.

Within this paradigm, students' intrinsic motivation emerges as a critical aspect of autonomous learning. Intrinsic motivation is a basic driver that pushes students to participate more deeply in the language learning processes (Little, 1991; Spratt et al., 2002). When students are intrinsically motivated, they have a natural desire to learn and explore topics on their own (Bodkyn & Stevens, 2015). This reciprocal relationship between engagement and motivation will induce motivation which can contribute to more comprehensive and effective language acquisition experiences.

In the Saudi EFL context, the implementation of self-directed learning necessitates a series of academically informed strategies. To begin with, the inclusion of task-based activities such as journaling and peer teaching in the curriculum will lend itself easily to craft activities that can switch the control of the language learning processes from a teacher-based approach to a more student-centered approach (Huang, 2022; Leatemia et al., 2016). However, tasks given to students should have meaning, be interesting, and address their language needs and cultural backgrounds.

Moreover, the integration of task-based activities along with self-assessment strategies offered by SDL will enable Saudi EFL students to encounter language learning challenges and build up strengths in achieving proficiency (Kicken et al., 2008; Qasem, 2020). Teachers can deviate from the use of standardized and unified traditional tests and incorporate other methods such as portfolios, real-world project-based assessments, and peer evaluations (Abrami et al., 2013; Barbera, 2009; Cheng & Chau, 2013; Morales & Mena, 2016). This shift matches the various ways Saudi EFL students can independently engage in language learning and, in the long run, will result in a more detailed and genuine assessment of their academic progress.

The next step to consider is integrating technology such as using online language learning platforms, interactive multimedia resources, and language learning applications (Merriam & Caffarella, 1999). These tools will enable Saudi EFL students to have access to varied materials most significantly on their own, thus possessing the courage to navigate their language learning independently. For instance, blogs are widely used in many educational settings to share personal experiences, assist learning, encourage self-assessment, and facilitate the internalization of knowledge in innovative ways (Butcher & Sumner, 2011; Robertson, 2011). The cooperative and reflective nature of blogs will provide Saudi learners with more engaging content, and a deeper understanding of the subject matter along with a better knowledge synthesis. However, teachers should bear in mind that, instructional methods within the paradigm of educational technology themes must remain relevant and engaging while effectively meeting the learning styles, preferences, and needs of Saudi EFL students in higher education (Tondeur et al., 2017).

Also, incorporating learner portfolios serves as a useful strategy to facilitate the acquisition of SDL skills (Abrami et al., 2013; Cheng & Chau, 2013; Morales & Mena, 2016). Specifically, e-portfolios are powerful techniques that can help Saudi learners improve their self-directed learning skills (Song, 2021). There is a noticeable increase in the adoption of electronic portfolios (e-portfolios) as tools to enhance self-directed learning (Abdullah et al., 2021). This transition is evident due to the immediate benefits that e-portfolios provide to learners (Abu Awwad, 2013). The appeal of using e-portfolios is universal as it helps learners use multimedia resources, which will in turn facilitate personal growth and achievement (Abdullah et al., 2021). In particular, e-portfolios used for learning purposes systematize the collection of input data and generate comprehensive summaries (Abrami et al., 2013; Barbera, 2009; Cheng & Chau, 2013). Saudi students, therefore, can have a record of their language learning journey and experiences. Further, they can set their learning goals, monitor progress, and reflect on what they have achieved and as such take responsibility for their language development.

Moreover, incorporating suitable and pertinent content and materials into the curriculum enhances the utilization of self-directed learning in language education (Guglielmino & Guglielmino, 2011; McCarthy & James, 2017; Wang & Cranton, 2014). When language learning is intertwined with Saudi Arabian culture, traditions, and current events, it fosters a sense of belonging and encourages exploration within their own cultural and social contexts. In addition, community engagement can boost collaborative learning environments where students cooperate, share resources, and discuss challenges (Brouwer & Jansen, 2019). This peer-to-peer collaborative learning mirrors the communal aspects of real-world language use and provides a supportive environment for Saudi EFL students to thrive academically.

Collaborative learning groups, whether within on-site classrooms or online forums, can create beneficial support for self-directed learners (Jacobs & Tan, 2015). Saudi EFL

students experiencing peer interaction, negotiations, and collaborative plans are more able to share resources, and exchange perspectives which can significantly contribute to their language development. Robertson (2011) pointed out that such collaboration is a drive for intrinsic motivation that stems from mutual understanding and engagement with course material and the existing perspectives in the collaborative learning environment. Collaborative assignments, for instance, can aid students in comprehending the subject matter. By applying shared knowledge, individual learning experiences can be richer, leading to broader knowledge understanding (Douglas & Morris, 2014).

Hence, applying the principles of self-directed learning in the Saudi EFL context in higher education can produce various benefits tailored to students' specific needs. This includes developing skills for lifelong learning, improving language proficiency, and essential abilities like self-assessment, goal-setting, and adaptability, which are important for continuous learning in college (Hamlin, 2022).

An important limitation of this study is the lack of an empirical method for collecting data, making it challenging to determine the true impact of self-directed learning on language acquisition and student outcomes. Future research could focus on conducting empirical studies to assess the effectiveness of various self-directed learning strategies in the Saudi EFL context, considering factors such as learner motivation, language proficiency gains, and the role of teacher support in facilitating SDL.

6. Conclusion

Integrating self-directed learning principles into the Saudi EFL context presents various challenges and opportunities. One significant challenge is the resistance to change, as traditional teaching methods are often observed in many Saudi EFL settings, despite teachers' statements of using interactive teaching methods. Cultural barriers, such as the preference for teacher-centered instruction and emphasis on rote learning (Alrashidi & Phan, 2015; Mohammad & Hazarika, 2016) can discourage the exploration and critical thinking required in self-directed learning. Despite these challenges, there are promising opportunities for incorporating SDL in the Saudi EFL context. For instance, SDL offers personalized learning experiences, allowing students to tailor their educational paths to their individual needs and interests, thus empowering them to take responsibility for their own learning. In addition, SDL can enhance learner motivation because they are more involved in what they are learning. Emphasizing student-centered approaches and implementing educational reforms can further support the integration of SDL in the Saudi EFL context.

In conclusion, the integration of autonomous learning ideologies into language classroom instruction can outperform the traditional classroom framework. This is because it develops students' critical skills and cultural awareness, and keeps students motivated throughout their academic endeavors and not just achieving short-term language learning goals. Language instructors should adapt to the

changing educational world, and encourage lifelong learning skills, personalized assessment, community involvement, collaborative learning, and technology use. As a result, such adaptation will ensure a well-rounded and future-ready language education approach. The combined effect of these elements not only meets the immediate goals of language proficiency but also equips students with the necessary skills needed for success in a rapidly evolving educational world.

7. References

- Abdullah, F., Ward, R., & Ahmed, E. (2016). Investigating the influence of the most commonly used external variables of TAM on students' perceived ease of use (PEOU) and perceived usefulness (PU) of e-portfolios. *Computers in Human Behavior*, 63(1), 75–90. <https://doi.org/10.1016/j.chb.2016.05.014>
- Abrami, P. C., Venkatesh, V., Meyer, E. J., & Wade, C. A. (2013). Using electronic portfolios to foster literacy and self-regulated learning skills in elementary students. *Journal of Educational Psychology*, 105(4), 1188–1209. <https://dx.doi.org/10.1037/A0032448>
- Abu Awwad, F. M. (2013). The impact of electronic portfolio on developing reflective thinking and self-directed learning readiness. *Cypriot Journal of Educational Sciences*, 8(1), 78–104.
- Alharbi, A. O. (2022). Issues with communicative language teaching implementation in Saudi Arabia concerning the government policy, teachers, and students: Two decades of research. *Arab World English Journal*, 13(2), 412–423. <https://dx.doi.org/10.24093/awej/vol13no2.28>
- Alhmadi, N. S. (2014). English speaking learning barriers in Saudi Arabia: A case study of Tiba University. *Arab World English Journal*, 5(2) 38–53. <https://awej.org/saudi-efl-learners-speaking-skills-status-challenges-and-solutions/>
- Ali, J. K. M., Shamsan, M. A., Guduru, R., & Yemmela, N. (2019). Attitudes of Saudi EFL learners towards speaking skills. *Arab World English Journal*, 10(2) 253–364. <https://dx.doi.org/10.24093/awej/vol10no2.27>
- Al-Khairy, M. (2013). English as a foreign language learning demotivational factors as perceived by Saudi undergraduates. *European Scientific Journal*, 9, 365–382.
- Alkubaidi, M. A. (2014). The relationship between Saudi English major university students' writing performance and their learning style and strategy use. *English Language Teaching*, 7(4), 83–95. <http://dx.doi.org/10.5539/elt.v7n4p83>
- Almutairi, N. H. (2008). *The influence of educational and sociocultural factors on the learning styles and strategies of female students in Saudi Arabia* [Doctoral dissertation]. University of Leicester.
- Alrashidi, O., & Phan, H. (2015). Education context and English teaching and learning in the Kingdom of Saudi Arabia: An overview. *English Language Teaching*, 8(25), 33–44. <http://dx.doi.org/10.5539/elt.v8n5p33>
- Al-Seghayer, K. (2014). The four most common constraints affecting English teaching in Saudi Arabia. *International of Journal English Linguistics*, 4(5), 17–26. <http://www.ccsenet.org/journal/index.php/ijel/article/view/40944>
- Al-Seghayer, K. (2021). Characteristics of Saudi EFL learners' learning styles. *English Language Teaching*, 14(7), 82–94. <https://doi.org/10.5539/elt.v14n7p82>
- Al-wossabi, S. (2022). A hybrid curriculum framework for developing content, sequence and methodology in the Saudi EFL context. *World Journal of English Language*, 12(8), 345. <http://dx.doi:10.5430/wjel.v12n8p345>

- Al-wossabi, S. (2024). College English teaching in Saudi Arabia: Challenges and solutions. *World Journal of English Language*, 14(1), 535–543.
<https://doi.org/10.5430/wjel.v14n1p535>
- Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works: Seven research-based principles for smart teaching*. Jossey-Bass.
- Anderson, M. R. (1993). *Success in distance education courses versus traditional classroom education courses* [Doctoral dissertation]. Oregon State University.
https://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/8k71nm73t
- Barbera, E. (2009). Mutual feedback in e-portfolio assessment: An approach to the portfolio system. *British Journal of Educational Technology*, 40(2), 342–357.
<https://doi.org/10.1111/j.1467-8535.2007.00803.x>
- Bodkyn, C., & Stevens, F. (2015). Self-directed learning, intrinsic motivation and student performance. *The Caribbean Teaching Scholar*, 5(2), 79–93.
<https://api.semanticscholar.org/CorpusID:146576733>
- Bolhuis, S. (2003). Towards process-oriented teaching for self-directed lifelong learning: A multidimensional perspective. *Learning and Instruction*, 13(3), 327–347.
[https://doi.org/10.1016/S0959-4752\(02\)00008-7](https://doi.org/10.1016/S0959-4752(02)00008-7)
- Bouchard, P. (1996). *Towards an etiological model of self-directed professional development*. Social Sciences and Humanities Research Council of Canada.
- Brockett, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning: Perspectives on theory, research, and practice*. Routledge.
- Brouwer, J., & Jansen, E. (2019). Beyond grades: Developing knowledge sharing in learning communities as a graduate attribute. *Higher Education Research & Development*, 38(2), 219–234. <https://doi.org/10.1080/07294360.2018.1522619>
- Bullock, S. M. (2013). Using digital technologies to support self-directed learning for preservice teacher education. *Curriculum Journal*, 24(1), 103–120.
<https://doi.org/10.1080/09585176.2012.744695>
- Butcher, K. R., & Sumner, T. (2011). Self-directed learning and the sensemaking paradox. *Human-Computer Interaction*, 26(1), 123–159.
<https://doi.org/10.1080/07370024.2011.556552>
- Charokar, K., & Dulloo, P. (2022). Self-directed learning theory to practice: A footstep towards the path of being a life-long learner. *Journal of Advances in Medical Education & Professionalism*, 10(3), 135–144. <https://doi.org/10.30476/JAMP.2022.94833.1609>
- Cheng, G., & Chau, J. (2013). A study of the effects of goal orientation on the reflective ability of electronic portfolio users. *Internet and Higher Education*, 16, 51–56.
<https://doi.org/doi:10.1016/j.iheduc.2012.01.003>
- Cheng, S., Kuo, C., Lin, K., & Lee-Hsieh, J. (2010). Development & preliminary testing of a self-rating instrument to measure self-directed learning ability of nursing students. *International Journal of Nursing Studies*, 47(9), 1152–1158.
<https://doi.org/10.1016/j.ijnurstu.2010.02.002>
- Chou, P. N., & Chen, W. F. (2008). Exploratory study of the relationship between self-directed learning and academic performance in a web-based learning environment. *Online Journal of Distance Learning Administration*, 11(1), 15–26.
https://www.researchgate.net/publication/285744417_Exploratory_Study_of_the_Relationship
- Ciekanski, M. (2007). Fostering learner autonomy: Power and reciprocity in the relationship between language learner and language learning adviser. *Cambridge Journal of Education*, 37(1), 111–127. <https://doi.org/10.1080/03057640601179442>

- Collis, B., & Moonen, J. (2012). *Flexible learning in a digital world: Experiences and expectations*. Routledge, Taylor & Francis Group.
- Demir, O. (2015). *The investigation of e-learning readiness of students and faculty members: Hacettepe University, Faculty of Education example* [Master's thesis]. Hacettepe University, Ankara.
https://file:///C:/Users/HP/Downloads/Documents/E_learningreadinessofacademicstaffanduniversities.pdf
- Douglas, C., & Morris, S. (2014). Student perspectives on self-directed learning. *Journal of the Scholarship of Teaching & Learning*, 14(1), 13–25.
<https://doi.org/10.14434/josotl.v14i1.3202>
- Edmondson, D. R., Boyer, S. L., & Artis, A. B. (2012). Self-directed learning: A meta analytic review of adult learning constructs. *International Journal of Education Research*, 7(1), 40–48. <https://www.aabri.com/OC2012Manuscripts/OC12058.pdf>
- Egel, İ. P. (2009). Learner autonomy in the language classroom: From teacher dependency to learner independency. *Procedia – Social and Behavioral Sciences*, 1(1), 2023–2026.
<https://doi.org/10.1016/j.sbspro.2009.01.355>
- Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & Education*, 59(2), 423–435. <https://doi.org/10.1016/j.compedu.2012.02.001>
- Fareh, S. (2010). Challenges of teaching English in the Arab world: Why can't EFL programs deliver as expected? *Procedia – Social and Behavioral Sciences*, 2(2), 3600–3604.
<https://doi.org/10.1016/j.sbspro.2010.03.559>
- Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners. The role of non-cognitive factors in shaping school performance: A critical literature review*. University of Chicago Consortium on Chicago School.
- Fatemeh, H., Mohammad, R. A., & Ali, M. M. (2016). On the effect of goal setting on self-directed learning, achievement motivation, and academic achievement among students. *Modern Applied Science*, 11(1), 37–47.
<https://doi.org/10.5539/mas.v11n1p37>
- Fisher, M., & King, J. (2010). The self-directed learning readiness scale for nursing education revisited: A confirmatory analysis. *Nurse Education Today*, 30(1), 44–48.
<https://doi.org/10.1016/j.nedt.2009.05.020>
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 111(23), 8410–8415.
<https://doi.org/10.1073/pnas.1319030111>
- Guglielmino, L. M. (2008). Why self-directed learning? *International Journal of Self-Directed Learning*, 5(1), 1–14.
file:///C:/Users/HP/Downloads/Documents/Scott_International_Journal_of_Self-Directed_Learning_2008.pdf
- Guglielmino, P. J., & Guglielmino, L. M. (2011). An exploration of cultural dimensions and economic indicators as predictors of self-directed learning readiness. *International Journal of Self-Directed Learning*, 8(1), 29–45.
file:///C:/Users/HP/Downloads/Documents/IJSDL8.1-2011_2.pdf
- Hamlin, M. D. (2022). Developing self-directed learning skills for lifelong learning. In P. Hughes & J. Yarbrough (Eds.), *Self-directed learning and the academic evolution from*

- pedagogy to andragogy* (pp. 209–234). IGI Global. <https://doi.org/10.4018/978-1-7998-7661-8.ch012>
- Hao, Y. (2016). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. *Computers in Human Behavior*, 59, 82–92. <https://doi.org/10.1016/j.chb.2016.01.032>
- Harriman, J. K. (1990). *The relationship between self-directed learning readiness, completion and achievement in a community college telecourse program* (Unpublished doctoral dissertation). University of Georgia, Athens, Greece.
- Hmelo, C. E., Gotterer, G. S., & Bransford, J. D. (1997). A theory-driven approach to assessing the cognitive effects of PBL. *Instructional Science*, 25, 387–408. <https://doi.org/10.1023/A:1003013126262>
- Huang, J. (2022). Task-based language teaching and rigorous instruction in beginning English as a second language classrooms. *New Directions for Adult and Continuing Education*, 2022(175–176), 59–70. <https://doi.org/10.1002/ace.20468>
- Imjai, N., Aujirapongpan, S., & Yaacob, Z. (2024). Impact of logical thinking skills and digital literacy on Thailand's Generation Z accounting students' internship effectiveness: Role of self-learning capability. *International Journal of Educational Research Open*, 6, Article 100329. <https://doi.org/10.1016/j.ijedro.2024.100329>
- Jacobs, G. M., & Tan, H. S. (2015). Advancing learner autonomy in EFL via collaborative learning. In H. P. Widodo (Ed.), *Proceedings from the 7th International Conference on Teaching English as Foreign Language (COTEFL)*. Purwokerto, Indonesia: Faculty of Letters, University of Muhammadiyah.
- Jennett, P. A. (1992). Self-directed learning: A pragmatic view. *Journal of Continuing Education in the Health Professions*, 12(2), 99–104. <https://doi.org/10.1002/chp.4750120208>
- Jossberger, H., Brand-Gruwei, S., Boshuizen, H., & van de Wiel, M. (2010). The challenge of self-directed and self-regulated learning in vocational education: A theoretical analysis and synthesis of requirements. *Journal of Vocational Education & Training*, 64(4), 415–440. <https://doi.org/10.1080/13636820.2010.523479>
- Karatas, K., & Arpaci, I. (2021). The role of self-directed learning, metacognition, and 21st century skills predicting the readiness for online learning. *Contemporary Technology*, 13(3), ep300. <https://doi.org/10.30935/cedtech/10786>
- Kasworm, C. (1983). Self-directed learning and lifespan development. *International Journal of Lifelong Education*, 2(1), 29–46. <https://doi.org/10.1080/0260137830020103>
- Khalid, M., Bashir, S., & Amin, H. (2020). Relationship between self-directed learning (SDL) and academic achievement of university students: A case of online distance learning and traditional universities. *Bulletin of Education and Research*, 42(2), 131–148. <https://files.eric.ed.gov/fulltext/EJ1281053.pdf>
- Khiat, H. (2017). Academic performance and the practice of self-directed learning: The adult student perspective. *Journal of Further and Higher Education*, 41(1), 44–59. <https://doi.org/10.1080/0309877X.2015.1062849>
- Kicken, W., Brand-Gruwel, S., & van Merriënboer, J. J. G. (2008). Scaffolding advice on task selection: A safe path toward self-directed learning in on-demand education. *Journal of Vocational Education & Training*, 60(3), 223–239. <https://doi.org/10.1080/13636820802305561>
- Kim, CM, Kim, M. K., Lee, C., Spector, J. M., & DeMeester, K. (2013). Teacher beliefs and technology integration. *Teaching and Teacher Education* 29, 76–85. <https://doi.org/10.1016/j.tate.2012.08.005>
- Knowles, M. S., Holton III, E. F., & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development*. Routledge.

- Leatemia, L. D., Susilo, A. P., & van Berkel, H. (2016). Self-directed learning readiness of Asian students: Students perspective on a hybrid problem-based learning curriculum. *International Journal of Medical Education*, 7, 385–392.
<https://doi.org/10.5116/ijme.582e.021b>
- Liton, H. A. (2012). Developing EFL teaching and learning practices in Saudi colleges: A review. *International Journal of Instruction*, 5, 129–152.
- Little, D. (1991). *Learner autonomy 1: Definitions, issues and problems*. Authentik.
- Loeng, S. (2020). Self-directed learning: A core concept in adult education. *Education Research International*, 2020, 1–12. <https://doi.org/10.1155/2020/3816132>
- Long, H. B., & Morris, A. S. (1996). The relationship between self-directed learning readiness and academic performance in a nontraditional higher education program. In H. B. Long & Associates (Eds.), *Current developments in self-directed learning* (pp. 139–156). Public Managers Center College of Education, University of Oklahoma.
- Loyens, S., Magda, J., & Rikers, R. (2008). Self-directed learning in problem-based learning & its relationships with learning. *Educational Psychology*, 20, 411–427
<https://doi.org/10.1007/s10648-008-9082-7>
- Mariano, G. J., & Batchelor, K. (2018). The role of metacognition and knowledge transfer in self-directed learning. In F. G. Giuseffi (Ed.), *Emerging self-directed strategies in the digital age* (pp. 141–159). IGI Global. <https://doi.org/10.4018/978-1-5225-3465-5.ch007>
- Marra, R. M., Hacker, D. J., & Plumb, C. (2021). Metacognition and the development of self-directed learning in a problem-based engineering curriculum. *Journal of Engineering Education*, 111, 137–161. <https://doi.org/10.1002/jee.20437>
- McCarthy, K. E., & James, W. B. (2017). Are teachers self-directed? An examination of teachers' professional learning. *International Journal of Self-Directed Learning*, 58–72.
- Merriam, S. B. (2018). Adult learning theory: Evolution and future directions. In K. Illeris (Ed.), *Contemporary theories of learning* (pp. 83–96). Routledge.
<https://file:///C:/Users/HP/Downloads/Documents/merriam.pdf>
- Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide*. John Wiley & Sons.
- Milligan, C., & Littlejohn, A. (2014). Supporting professional learning in a massive open online course. *The International Review of Research in Open and Distributed Learning*, 15(5). <https://doi.org/10.19173/irrodl.v15i5.1855>
- Mohammad, T., & Hazarika, Z. (2016). Difficulties of learning EFL in KSA: Writing skills in context. *International Journal of English Linguistics*, 6(3), 105–117.
<https://doi.org/10.5539/ijel.v6n3p105>
- Morales, H. S., & Mena, R. G. (2016). Student self-evaluation and autonomy development in EFL learning. *Revista de Lenguas Modernas*, (25), 199–222.
<https://doi.org/10.15517/rlm.v0i25.27695>
- Morris, T. H. (2019). Self-directed learning: A fundamental competence in a rapidly changing world. *International Review of Education*, 65(4), 633–653.
<https://doi.org/10.1007/s11159-019-09793-2>
- Oducado, R.F. (2021). Academic performance and the role of self-directed learning, self-esteem, and grit among nursing students. *Jendela Nursing Journal*, 5(1), 1–9.
<https://doi.org/10.31983/jnj.v5i1.6634>
- O'Shea, E. A. (2003). Self-directed learning in nurse education: A review of the literature. *Journal of Advanced Nursing*, 43, 42–70.
<https://doi.org/10.1046/j.1365-648.2003.02673.x>

- Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1–6. <https://doi.org/10.1108/10748120110424816>
- Qasem, F. A. A. (2020). The effective role of learners' self-assessment tasks in enhancing learning English as a second language. *Arab World English Journal*, 11(3), 502–514. <https://dx.doi.org/10.24093/awej/vol11no3.33>
- Rampai, N. (2015). Model of knowledge management via social media to enhance graduated student's self-directed learning skill. *International Journal of Information and Education Technology*, 5(10), 799–802. <https://doi.org/10.7763/IJiet.2015.V5.614>
- Richards, J. C. (2015). Technology in language teaching today. *Indonesian Journal of English Language Teaching*, 10(1), 18–32. <https://doi.org/10.25170/ijelt.v10i1.654>
- Robertson, J. (2011). The educational affordances of blogs for self-directed learning. *Computers & Education*, 57(2), 1628–1644. <https://doi.org/10.1016/j.compedu.2011.03.003>
- Sakai, S., Takagi, A., & Chu, M. (2010). Promoting learner autonomy: Student perceptions of responsibilities in a language classroom in East Asia. *Educational Perspectives*, 43(12), 12–27.
- Saxena, S. (2013, December 02). How technology supports self-directed learning. *EDTech Review*. <https://edtechreview.in/news/824-how-technology-supports-self-directed-learning>
- Sembiring, J., Ambyar, Mubai, A., Dakhi, O., & Edi, F. (2023). Project-oriented self-directed learning as a learning model to improve learning outcomes. *Advances in Social Science, Education and Humanities Research*, 747, 116–121. https://doi.org/10.2991/978-2-38476-050-3_13
- Shaan, I. E. (2019). Remodeling teachers' and students' roles in self-directed learning environments: The case of Saudi context. *Journal of Language Teaching and Research*, 10(3), 549–556. <https://doi.org/10.17507/JLTR.1003.19>
- Slater, C. E., Cusick, A., & Louie, J. C. (2017). Explaining variance in self-directed learning readiness of first year students in health professional programs. *BMC Medical Education*, 17(1), 1–10. <https://doi.org/10.1186/s12909-017-1043-8>
- Song, B. K. (2021). E-portfolio implementation: Examining learners' perception of usefulness, self-directed learning process and value of learning. *Australasian Journal of Educational Technology*, 37(1), 68–81. <https://doi.org/10.14742/ajet.6126>
- Spencer, J. A., & Jordan, R. K. (1999). Learner centered approaches in medical education. *British Medical Journal*, 318(7193), 1280–1283. <https://doi.org/10.1136/bmj.318.7193.1280>
- Spratt, M., Humphreys, G., & Chan, V. (2002). Autonomy and motivation: Which comes first? *Language Teaching Research*, 6(3), 245–266. <https://doi.org/10.1191/1362168802lr106oa>
- Sun, W., Hong, J., Dong, Y., Huang, Y., & Fu, Q. (2022). Self-directed learning predicts online learning engagement in higher education mediated by perceived value of knowing learning goals. *The Asia-Pacific Education Researcher*, 32, 307–316. <https://doi.org/10.1007/s40299-022-00653-6>
- Suratullah, G., Ahmad, S. B., Hassan, A. J., & Manu, S. M. (2023). Self-regulated learning in the teaching of speaking and listening skills integrated with self-confidence and linguistic awareness: A lesson learned from a university in Turkey. *Journal of Language and Literature Studies*, 3(2). <https://doi.org/10.36312/jolls.v3i2.1339>
- Thornton, P., & Sharples, M. (2005). Patterns of technology use in self-directed Japanese language learning projects and implications for new mobile support tools. In B. Werner (Ed.), *Proceedings of the 2005 IEEE International Workshop on Wireless and*

- Mobile Technologies in Education* (pp. 203–205). IEEE Computer Society. <https://doi.org/10.1109/WMTE.2005.49>
- Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *ETR&D—Educational Technology Research and Development*, 65(3), 555–575. <https://doi.org/10.1007/s11423-016-9481-2>
- Turner, J. E. (2007). *Readiness for self-directed learning: Comparison of college-prep and vocational education public high school seniors* [Doctoral thesis]. University of Missouri, St. Louis.
- Wang, G. Q. (2020). On the strategies to cultivate college students' autonomous English learning ability in the new era. *English Language Teaching*, 13, 94–99. <https://doi.org/10.5539/elt.v13n11p94>
- Wang, V. C., & Cranton, P. (2014). Cultures and self-directed learning. In V. Wang (Ed.), *Handbook of research education and technology in a changing society* (pp. 1014–1023). IGI Global.
- Yilmaz, R. (2016). Knowledge sharing behaviors in e-learning community: Exploring the role of academic self-efficacy and sense of community. *Computers in Human Behavior*, 63, 373–382. <https://doi.org/10.1016/j.chb.2016.05.055>
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50031-7>