Students' Self-directed Learning in English in Foreign Language Classes After the Coronavirus Disease 2019 Pandemic in Saudi Arabia

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This study examined the self-directed learning readiness of 211 Saudi Arabian high school students after the COVID-19. The results showed high readiness for self-directed learning (SDL) in the EFL context, with a score of 235 out of 300. Factors influencing SDL readiness included the learning environment and student's intrinsic motivation. Further research is recommended to evaluate learning outcomes and explore SDL-applicable models for teachers and students.

Keywords: self-directed learning, self-directed learning readiness, self-directed language learners, self-rating scale of self-directed learning, self-directed learning factors, sex, Saudi English as a foreign language readiness

Introduction

The COVID-19 pandemic has accelerated the adoption of self-directed learning (SDL) in education, enabling students to work independently and achieve success in language learning. According to Williamson (2007), SDL is an approach to learning in which students are responsible for their own learning and work independently. SDL readiness is the degree to which self-directed learners take personal control of their learning and acknowledge the freedom associated with learning. This requires self-discipline, autonomy, effective communication, organization, acceptance of constructive feedback, and engagement in self-evaluation and self-reflection. The Saudi Ministry of Education and Saudi Vision 2030 aim to empower graduates with skills such as independent learning, problem-solving, critical thinking, creative thinking, and lifelong learning. The Ministry of Education's customized curriculum for the academic year 2022-2023, particularly in the high school tracks system, reflects this goal. However, studies on SDL's importance in higher education have focused less on high school students' SDL readiness levels.

This study examined Saudi high school EFL students' readiness for Self-Directed Learning (SDL) during and after the COVID-19 pandemic, using the SRSSDL to assess skill levels and sex-related differences. The study sought to answer three main questions:

(1) To what extent are Saudi English as a foreign language high school students ready to become self-directed language learners post-online learning at the height of the COVID-19 pandemic?

(2) Are there any statistically significant differences between male and female students in SDL readiness post-online learning at the height of the COVID-19 pandemic?

(3) What are the internal and external factors that influence Saudi English as a foreign language high school students' self-directed language learning skills post-online learning at the height of the COVID-19 pandemic?

Literature Review

Background

Definitions and history of self-directed learning. Self-directed learning (SDL) is a learning process where individuals diagnose their needs, set goals, identify resources, implement strategies, and evaluate outcomes. Guglielmino (1978) defines SDL as a highly self-directed learner with initiative, independence, persistence, self-discipline, and a strong desire to learn. It involves planning, executing, and evaluating one's own learning experiences, requiring initiative, ability, and willingness from the learner. This process requires self-confidence, self-discipline, and self-confidence.

Dimensions of self-directed learning. Using the work of Knowles (1975) and Brookfield (1986) as a foundation, Garrison (1997) proposed a well-known model of SDL with three dimensions: (1) self-management; (2) self-monitoring; and (3) motivation (Figure 1).
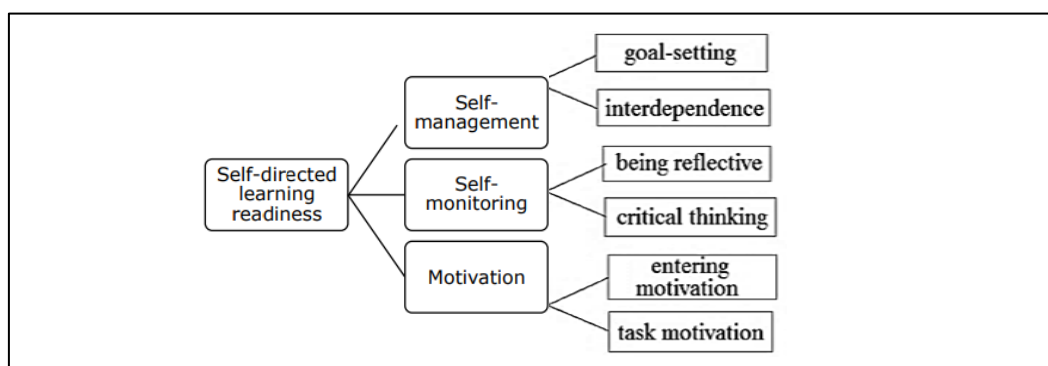

Figure 1. Dimensions of self-directed learning (Garrison, 1997; Sam & Shalini, 2021).

Garrison's SDL model promotes effective learning by encouraging learners to take personal responsibility, collaborate, and self-monitoring, focusing on external activities and motivation (Figure 2).
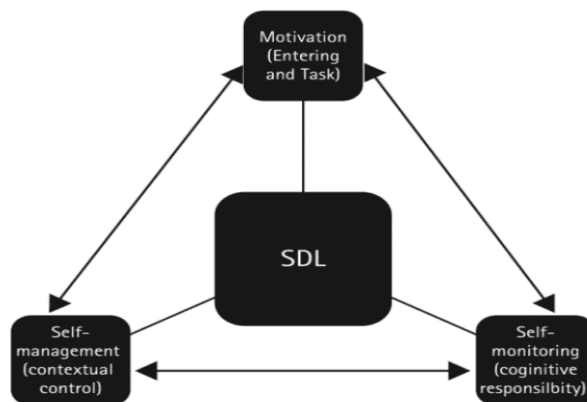

Figure 2. Relationships between Garrison's (1997) self-directed learning dimensions (Parkes, 2021).

Self-directed learner should be able to set goals, identify materials, and evaluate outcomes.

Review of the Research on Self-directed Learning for English as Foreign Language Learners

Self-directed learning and 21st-century learning skills. Self-directed learning (SDL) is a crucial 21st-century skill that empowers students to manage their learning processes, utilize prior knowledge, reflect on their learning, and connect school and external knowledge. Karatas and Zeybek (2020) found a statistically significant association between SDL skills and 21st-century competencies. Additionally, SDL ability is a good indicator of 21st-century abilities. Studies have investigated the role of SDL as a means of improving learners' achievement and academic performance.

Alghamdi's (2021) study on female Saudi postgraduate students found that self-directed distance learning (SDL) during COVID-19 improved academic performance, self-reliance, and commitment, while also fostering reflection and self-evaluation.

The role of technology in self-directed learning readiness. Al Fadda (2020) examined the effect of mobile applications on EFL learning, focusing on Instagram and Snapchat, and the study showed that these apps could increase students' motivation for reading English materials and allow them to become immersed in an English language environment. Moreover, Al Fadda and Mahdi (2021) found a positive association between real Zoom use and student views and behavioral intentions. This is emphasized by the results of Murniati, Hartono, and Nugroho (2022) who explored the role of technology support and the self-digital legacy of university students in SDL readiness and found that technology readiness indicated students' SDL readiness during the pandemic. Van Lieshout and Cardoso (2022) found that Google Translate and its associated tools, such as TTS and ASR, effectively aid in self-directed language learning.

Self-directed learning readiness. Although Saudi EFL learners showed low levels of responsibility in learning (Alrabai, 2017b), Humaira and Hurriyyah (2018) studied Indonesian high school students' willingness to take the initiative and assume responsibility for their own learning outside the classroom. Dwilestari et al. (2021) examined the SDL skills of higher education EFL students at the height of the COVID-19 pandemic and the results showed that learners' SDL readiness was moderate. However, Mohammed's 2022 study on Saudi English major students revealed that they lack confidence in their ability to independently learn English.

Self-directed language learning readiness and effectiveness. Research indicates that a student-centered approach to language learning significantly enhances students' (SDL) readiness, allowing them to make decisions about their learning experiences. Alghamdi's (2016) study showed variation in self-directedness ratings between successful and less successful learners. Adnan and Sayadi's (2021) study found a positive correlation between students' self-directedness and their readiness to incorporate SDL in their English writing skills, despite previous conflicting results.

Factors influencing self-directed learning readiness. Previous research reviews on SDL have demonstrated the relationship between personality factors and SDL readiness. External factors such as supportive family and academic environments can motivate students to achieve much and increase their interest in learning. Internal motivation also plays an important role in student SDL readiness, as evidenced by Ramli, Muljono, and Afendi's (2018) study of fourth-year medical students at Tadulako University in Indonesia. Research indicates that students with high motivation, interest, and confidence in academics are more likely to manage study time effectively and independently acquire necessary knowledge.

Yang, Zhu, Jiang, and Qu's (2021) cross-sectional study found that contextual factors such as age, sex, learning resources, family income, and group discussion were significantly related to the overall SDL scores and abilities of learners in China. Munasingh, Sutha, and Perera's (2020) study identified 11 crucial characteristics (internal

and external) that had a positive or negative impact on the SDL of management undergraduates in national universities.

Williamson's (2007) self-rating scale of self-directed learning (SRSSDL). Williamson (2007) categorizes SDL levels into high, moderate, and low, requiring assessment using SRSSDL, which includes 60 items in five areas: awareness, learning strategies, activities, evaluation, and interpersonal skills.

Methods

Research Design

The study utilized a descriptive qualitative research method to analyze high school students' SDL readiness levels and critical factors in Saudi Arabia, using both closed-ended (SRSSDL) and open-ended questionnaires for data collection and analysis.

Participants and Instruments

211 participants completed SRSSDL and 16 high school EFL students completed an open-ended questionnaire through interactive learning groups in WhatsApp and Telegram.

SRSSDL Questionnaire Reliability

The questionnaire's internal consistency reliability was calculated by Williamson (2007) using Cronbach's alpha coefficient, as shown in Table 1.

Table 1

Cronbach's Alpha Coefficient Results for the Self-rating Scale of Self-directed Learning

Item	No. of items	Alpha value
Awareness	12	0.921
Learning strategies	12	0.845
Learning activities	12	0.852
Evaluation	12	0.862
Interpersonal skills	12	0.872
Total	60	0.960

The questionnaire's reliability was confirmed by high Cronbach's alpha coefficients, indicating the accuracy and truthfulness of the responses and analysis results.

Scale Correction

The study used a five-point scale to assess self-directed learning (SRSSDL) responses from respondents. All items were positively stated, with a maximum score of 300 and a minimum score of 60. A score sheet was created to interpret responses, indicating respondents' self-direction in learning.

Table 2

Self-rating Scale of Self-directed Learning Scoring Range and Interpretation

Scoring range of scale	Scoring range of the section	Level of self-directed learning	Interpretation
60-140	12-28	Low	Guidance is needed from the teacher. Any specific changes necessary for improvement and a possible restructuring of the learning methods must be identified.
141-220	29-44	Moderate	This is halfway to becoming a self-directed learner. Areas for improvement must be identified and evaluated, and a strategy must be adopted with teacher guidance when necessary.

Table 2 to be continued

221-300	45-60	High	This indicates effective self-directed learning. The goal is to keep making progress by finding the students' strengths and ways to improve their self-directed learning.

The study utilized an open-ended questionnaire to gauge respondents' views on factors affecting their SDL readiness post-COVID-19 online learning, employing thematic analysis to identify patterns (Table 3).

Table 3

Braun and Clarke's (2006) Six-Phase Framework for Conducting a Thematic Analysis

Step 1: Familiarize yourself with the data.	Step 4: Review the themes.
Step 2: Generate initial codes.	Step 5: Define the themes.
Step 3: Search for themes.	Step 6: Compose a write-up.

Results

1. To what extent are Saudi English as a foreign language high school students ready to become self-directed language learners post-online learning at the height of the COVID-19 pandemic?

The study found that high school students' mean total SDL level was 235.1 ± 38.41, high according to Williamson's (2007) scale. All dimensions had high mean levels, with learning strategies having the highest mean level. Standard deviation values varied between 7.53 and 8.88, indicating differences in student evaluations.

Table 4

Means, Standard Deviations, and Ranks of Sections of the Self-rating Scale of Self-directed Learning

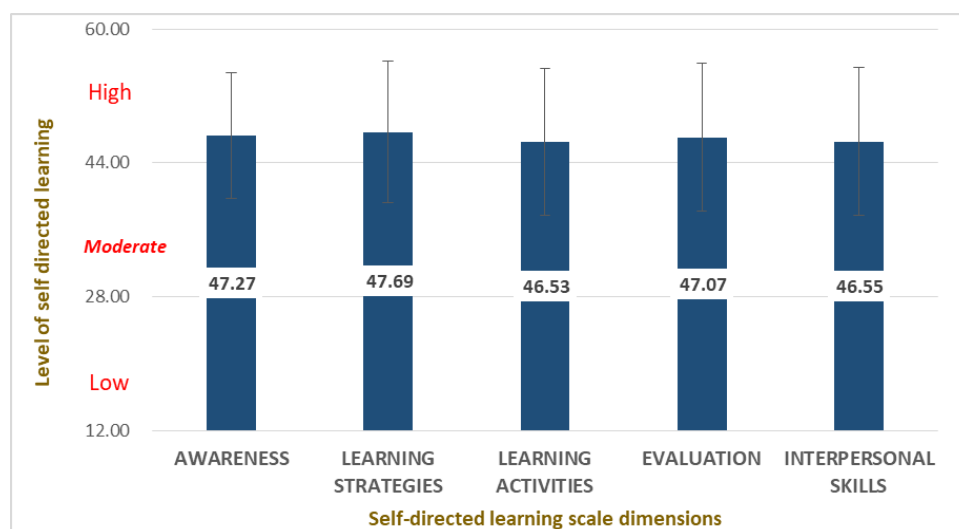| Item	Mean $\pm$ SD	Level of self-directed learning	Rank
Awareness	47.27 ± 7.53	High	2
Learning strategies	47.69 ± 8.48	High	1
Learning activities	46.53 ± 8.77	High	5
Evaluation	47.07 ± 8.88	High	3
Interpersonal skills	46.55 ± 8.87	High	4
Self-rating scale of self-directed learning	235.1 ± 38.41	High	

Note. SD = standard deviation.

Figure 3. Means and standard deviations of the study participants' responses to the Self-Rating Scale of Self-Directed Learning.

2. Are there any statistically significant differences between male and female students in self-directed learning readiness post-online learning at the height of the COVID-19 pandemic?

The study found significant differences in SDL readiness post-online learning during the COVID-19 pandemic between male and female students. Females scored higher on evaluation, learning activities, and learning strategies dimensions, while males did not show significant differences in awareness and interpersonal skills.

Table 5

Comparison of Male and Female Students' Readiness for Self-directed Learning Aspects Post-Online Learning at the Height of the COVID-19 Pandemic Using T-Tests

Items	Gender	Number	Mean ±SD	Df	T	*P*
Awareness	Male	85	46.12 ±7.59	177	-1.835	0.068
	Female	126	48.06 ±7.43			
Learning strategies	Male	85	46.14 ±8.74	172	-2.166	0.032*
	Female	126	48.73 ±8.18			
Learning activities	Male	85	44.96 ±8.8	178	-2.133	0.034*
	Female	126	47.58 ±8.63			
Evaluation	Male	85	45.38 ±9.01	175	-2.276	0.024*
	Female	126	48.21 ±8.63			
Interpersonal skills	Male	85	45.91 ±8.19	195	-0.881	0.380
	Female	126	46.98 ±9.31			

Notes. SD = standard deviation; Df = degree of freedom; T = hypothesis testing (the *t*-value measures the size of the difference in the sample); *P* = probability.
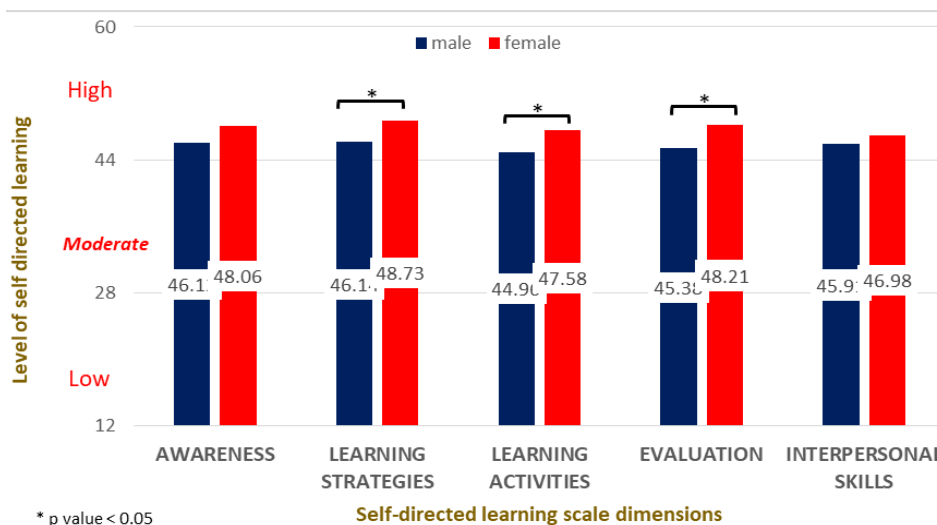

Figure 4. Mean responses of the male and female study participants regarding the dimensions of self-directed learning and statistical significance of the differences between them.

Table 6

Comparison of Male and Female Students' Self-directed Learning Readiness Post-Online Learning at the Height of the COVID-19 Pandemic Using T-Tests

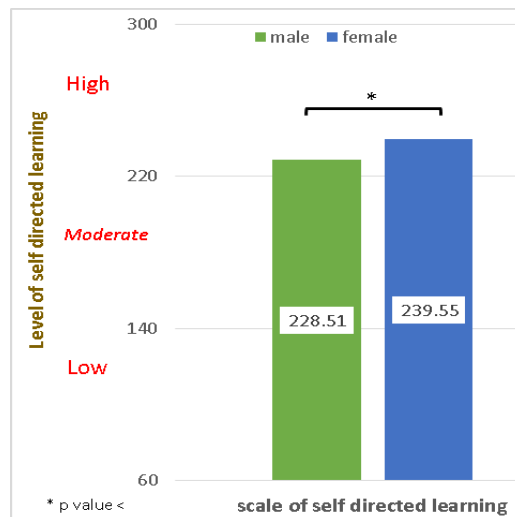| Item	Gender	Number	Mean ±SD	Df	T	*P*
The self-rating scale of self-directed learning	Male	85	228.51 ±38.42	179	-2.058	0.041*
	Female	126	239.55 ±37.92			

Figure 5. Means of the responses of the male and female study participants on the self-rating scale of self-directed learning and statistical significance of the difference between them.

Table 6 and Figure 5 reveal significant differences in SRSSDL assessments between female and male study participants, with females scoring higher (239.55 ±37.92 vs. 228.51 ±38.42).

3. What are the internal and external factors that influence Saudi high school English as foreign language students' self-directed language learning readiness post-online learning at the height of the COVID-19 pandemic?

The study utilized an open-ended questionnaire to assess the motivation and learning environment of Online Distance Learning (SDL) during the COVID-19 pandemic. It is possible to avoid a very massive number of codes and give a framework to generate categories of codes, by keeping the research topic in mind when coding (Belotto, 2018, as cited in Yeung & Yau, 2022).

Summary of Themes (Table 7)

Table 7

Themes of the Factors Influencing Students' Self-directed Learning Readiness Post-Online Learning at the Height of the COVID-19 Pandemic

Theme: The role of the learning environment **Subtheme: School facilities** ▪ Not fully equipped ▪ Inaccessible learning resources ▪ Uncomfortable libraries ▪ No Wi-Fi or devices **Subtheme: Teacher's role** ▪ Low level of interaction ▪ Encourages students' SDL ▪ Facilitates students' SDL ▪ Doesn't provide SDL direction Theme definition The students find it difficult post-online learning at the height of the COVID-19 pandemic to engage in SDL in the school due to the shortage of technology facilities and students' perspectives on the teachers' role in SDL.	**Theme: The role of the family** ▪ Awareness ▪ Inspiration ▪ Psychological and physical support ▪ Devices ▪ Comfortable environment Theme definition The students appreciate the role of their families in their online learning during the COVID-19 pandemic, which has a positive impact on their SDL post-online learning at the height of the COVID-19 pandemic.	**Theme: The role of online learning during the COVID-19 pandemic** ▪ The role of technology ▪ Active learning ▪ New learning resources and platforms ▪ New skills ▪ Some challenges ▪ No differences ▪ No interest Theme definition The students' online learning experience and skills improved during the online classes, which enhanced their SDL readiness post-online learning at the height of the COVID-19 pandemic.	**Theme: The role of motivation** **Subtheme: Internal motivation** ▪ Self-awareness ▪ Self-regulation ▪ Readiness ▪ Interest in topics ▪ Experience **Subtheme: External motivation** ▪ Learning environment ▪ Life change requirements ▪ Labor market requirements Theme definition The students reported that their awareness of and interest in learning reflected their SDL readiness. Life changes and requirements motivate them to obtain this skill.

1. The role of the learning environment;

2. The role of the family;

3. The role of online learning during the COVID-19 pandemic;

4. The role of motivation.

The learning environment.

School facilities. The learning environment was deemed unsuitable and uncomfortable, with some facilities supporting SDL, and students used devices at home due to restrictions during the pandemic.

> There are no technology facilities or laboratories in my school. The students must search for information and learn on their own, but the school does not offer internet services or devices for us, so we miss this skill in the school. (Student Amani)

Teachers. Teachers' role in students' Self-Determination Learning (SDL) is crucial, but they often fail to effectively apply this knowledge in the classroom context.

> Not all teachers give us opportunities to practice this skill in the classroom, but some of my teachers in school support and teach us using the self-directed learning approach. (Student Atheer)
>
> I faced some difficulties, such as our teachers assigning too many activities to us that we're supposed to undertake alone, without any explanation, under the name of self-directed learning. I think it's not right. (Student Shaimaa)

The family. Families significantly contribute to students' self-directed learning readiness by equipping them with the necessary tools and devices for independent study.

> My family provides devices and internet connection at home for self-learning. They also encourage me, allow me to enroll in training courses, and provide a comfortable learning atmosphere. My family members are aware of the importance of this skill. (Students Wajed and Alia)

Online learning experience. During the COVID-19 pandemic, online classes allowed students to explore their learning potential and find new resources, but some faced challenges due to lack of self-management and motivation.

> Yes, I found many learning sources other than the teacher, and it affected me positively and made me focus on self-learning skill more than before. (Student Lyan)
>
> Yes, the coronavirus pandemic has affected all areas of our personal, social, and professional lives, and we had not had to show our ability to be flexible and adaptable before as much as at this time. (Students Sultan and Nora)

Motivation. Intrinsic motivation for self-directed learning involves self-awareness, leadership, and training, while extrinsic elements include changes in life, labor market requirements, learning environment, and family support. (Student Hamad)

Discussion

High School English as Foreign Language Learners' Levels of Self-directed Learning Readiness Post-Online Learning at the Height of the COVID-19 Pandemic

This research found that Saudi high school students have a significant degree of SDL readiness post-online learning at the height of the COVID-19 pandemic. This contrasts with previous studies that found learners' SDL readiness levels were either low or moderate (i.e., Alrabai, 2017a; 2017b; Humaira & Hurriyah, 2018; Dwilestari,

Zamzam, Susanti, & Syahrial, 2021; Boukhors & Boumaza, 2021; Mohammed, 2022). The study finds that students excel in SDL aspects such as learning strategies, self-awareness, evaluation, interpersonal skills, and activities. These aspects interact dynamically, promoting self-esteem and interpersonal skills. SDL empowers students to take charge of their education, allowing teachers to provide assistance.

Difference Between Female and Male Learners' Self-directed Learning Readiness

This study found that there was no significant difference in SDL between male and female learners, but that female learners had slightly higher SDL readiness than male learners. This coincides with Wong, Tang, and Cheng's (2021) study, which showed that female sex was associated with significant SDL improvement. González-Gómez, Guardiola, Martín-Rodríguez, and Montero-Alonso (2012) found that female students value learning methods, planning, and encouragement of active participation more highly than do male students. Studies showed no significant gender difference in online learning, suggesting that technology can encourage self-directed learning, regardless of sex, in classroom instruction.

Factors Influencing Self-directed Learning Readiness

The study highlights the impact of internal factors like achievement motivation and interest in learning on students' SDL, while teachers' role in promoting and implementing these skills is crucial.

Morris (2019) summed up factors that could lead to success in SDL, such as freedom to learn, an abundance of resources, choice, control, and fun. Elashhab (2020) argued that the sudden shift of students to online education or distance learning without having any fair practice or experience in it might give rise to these challenges. Elashhab (2022) found that only 29.8% of students were highly skilled in using online communication platforms, while 66.7% had moderate skills and 3.5% had limited information technology skills. Murniati et al. (2022) found that external factors such as technical support, infrastructure support, and leadership also affect e-learning satisfaction and SDL readiness. The flexible environment of online learning during the COVID-19 pandemic provided opportunities to implement more SDL learning activities.

Conclusion

The current study investigated the SDL readiness of high school students in Saudi Arabia post-online learning at the height of the COVID-19 pandemic and the factors affecting this readiness. The results showed that students scored a high level of SDL skills identifying two main factors influencing their readiness: learning environment and motivation. The findings also highlight the importance of learners' readiness for language learning in the rapidly expanding field.

Limitations and Recommendations

The study suggests improving students' SDL readiness and learning outcomes by training teachers, enhancing the learning environment, focusing on achievement motivation, and developing specific topics related to SDL, among other recommendations.

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