



Exploring Self-Directed Learning to Enhance Arabic Language Skills among Pre-Service Teachers at an Indonesian Islamic University

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ENGLISH ABSTRACT

This study aims to investigate the level of Self-Directed Learning (SDL) skills and the factors influencing them among preservice Arabic teachers in Indonesia. This study used a mixed-method approach with a sequential explanatory design. Quantitative data were collected through questionnaires completed by 262 students of the Arabic Language Education Study Program and supported by Focus Group Discussions. The results showed that students' SDL levels varied, with learning strategies categorized as high (Mean = 3.71) and learning activities categorized as moderate (Mean = 3.18). Self-efficacy, social support, and institutional facilities were identified as the main supporting factors, while low intrinsic motivation and dependence on external feedback became the major inhibiting factors. The findings indicate that students' SDL skills have developed but still require improvement, especially in motivation and self-evaluation. Therefore,

institutional support through interactive learning strategies and digital learning resources is needed to strengthen students' learning independence.

Keywords: Self-Directed Learning, Arabic as a Foreign Language, Pre-Service Arabic Teachers, Language Learning Autonomy

INDONESIAN ABSTRACT

Penelitian ini bertujuan untuk menginvestigasi tingkat keterampilan Self-Directed Learning (SDL) dan faktor-faktor yang memengaruhinya pada calon guru bahasa Arab di Indonesia. Penelitian ini menggunakan pendekatan mixed methods dengan desain sequential explanatory. Data kuantitatif diperoleh melalui angket yang diisi oleh 262 mahasiswa Program Studi Pendidikan Bahasa Arab dan didukung melalui Focus Group Discussion. Hasil penelitian menunjukkan bahwa tingkat SDL mahasiswa bervariasi, dengan dimensi strategi belajar berada pada kategori tinggi (Mean = 3,71) dan aktivitas belajar berada pada kategori sedang (Mean = 3,18). Efikasi diri, dukungan sosial, dan fasilitas institusi menjadi faktor utama yang mendukung SDL, sedangkan rendahnya motivasi intrinsik dan ketergantungan pada umpan balik eksternal menjadi faktor penghambat utama. Temuan penelitian menunjukkan bahwa keterampilan SDL mahasiswa telah berkembang tetapi masih memerlukan penguatan, terutama dalam aspek motivasi dan evaluasi diri. Oleh karena itu, dukungan institusi melalui strategi pembelajaran interaktif dan penyediaan sumber belajar digital diperlukan untuk memperkuat kemandirian belajar mahasiswa.

Kata Kunci: Belajar Mandiri, Bahasa Arab sebagai Bahasa Asing, Calon Guru Bahasa Arab, Kemandirian Pembelajaran Bahasa

Introduction

Contemporary education is characterized by a paradigm shift from teacher-centered learning to learner-centered learning, which is in line with the demands of 21st-century competencies (Giveh et al., 2018). In this context of change, Self-Directed Learning (SDL) exists not merely as a useful skill, but as a critical imperative for academic and professional success. Rooted in the principles of andragogy, SDL is conceptualized as a process in which learners, with or without external assistance, proactively diagnose their learning needs, formulate goals, identify resources, select and apply appropriate strategies, and evaluate learning outcomes (Garrison, 1997; Knowles, 1977). This approach forces individuals to seek and find digitally based information using easily accessible devices, enabling them to adapt and get used to the lifelong learning required in today's era (Sharpe & Kelley, 2014). Especially in foreign language acquisition, where explanations and exercises must be done continuously, SDL provides an essential framework for learners to pay attention to their linguistic development, thereby bridging the gap between formal learning and authentic mastery.

The strategic role of SDL in facilitating effective language acquisition has been widely documented in various linguistic contexts. Numerous empirical studies consistently show that learners with a high level of independence tend to be better able to adjust their learning methods independently, utilize metacognitive strategies, and maintain long-term learning motivation, thereby leading to measurable improvements in language proficiency.

Several studies show that SDL contributes significantly to improving speaking accuracy and communicative competence through strengthening learner autonomy, self-assessment practices, and setting personal learning goals (De Vrind et al., 2024; Ni'mah et al., 2025). Furthermore, learners who are consciously able to manage their learning process demonstrate better reflective capacity and the ability to select and apply effective language learning strategies. This ultimately improves their ability to express ideas and engage in meaningful communication (Razali et al., 2018; Su et al., 2023). Thus, SDL can be understood as a bridge that connects structured classroom learning with autonomous language use in real contexts, enabling learners to build an independent ecosystem for language skill development (Hong Nguyen et al., 2023; Pishkar & Majedi, 2016).

Although there is strong evidence supporting the effectiveness of SDL in foreign language learning in general, significant research gaps still exist in studies of its application in the specific context of Arabic as a Foreign Language (AFL), particularly in teacher education. The literature that has developed in the field of Arabic pedagogy has mostly focused on classroom learning methodologies, the use of instructional media, the development of teaching materials, and the integration of learning technology (Alyaqoubi et al., 2024; Riyadi et al., 2024). Although important, this focus often neglects the internal processes of learners that take place outside the formal teaching framework. This gap is particularly relevant given the unique position of Arabic in the Indonesian context, where it functions not only as a means of communication but also as a sacred language in religious studies and practices (Al Shlowiy, 2022). This dual identity of Arabic has the potential to give rise to different dynamics of motivation, challenges, and strategic approaches in independent learning, but until now it has received relatively little academic attention. Therefore, a more in-depth study is needed on how SDL is

manifested among individuals who are being prepared to master and teach Arabic, namely, prospective Arabic teachers.

In line with this, this study aims to fill the identified gap by focusing on preservice Arabic language teachers at Islamic universities in Indonesia. This group is considered strategic because they face dual and interconnected demands: achieving academic proficiency in Arabic while developing pedagogical and andragogical competencies for future teaching practices. Their learning process requires an andragogical approach that views students as adult learners who are intrinsically motivated, possess diverse educational experiences, and are oriented toward solving real problems in future classroom contexts (Gutu et al., 2024; Knowles, 1977).

In the context of Arabic language learning, SDL enables preservice teachers to independently identify learning needs, determine learning goals, select appropriate strategies and resources, and evaluate their own learning progress. These processes encourage greater engagement with authentic Arabic materials and provide broader opportunities to practice listening, speaking, reading, and writing skills beyond formal classroom settings. Therefore, the level of SDL developed by preservice Arabic teachers becomes an important indicator of their readiness to implement autonomous, reflective, and adaptive learning and teaching practices in modern educational environments. Understanding their SDL dynamics is not only related to language acquisition but also to the development of their professional identity as future educators.

Based on this andragogical perspective, this study uses a mixed-methods approach with the aim of: (1) empirically investigating the level of self-directed learning skills perceived by prospective Arabic teachers in key dimensions, including learning awareness, learning strategies, learning activities, self-evaluation, and interpersonal skills; and (2) identify and explain the key factors that act as facilitators and inhibitors of their involvement in the SDL process for Arabic language mastery.

Methods

This study uses a mixed-methods approach with a sequential explanatory design. This design was chosen because it allows researchers to gain a comprehensive understanding of the SDL phenomenon by combining the strengths of quantitative and qualitative data (Friedl-Knirsch & Anthes, 2024). In the first stage, quantitative data

were collected through surveys to measure the SDL skills of pre-service Arabic teachers. The second stage was carried out to deepen and explain the quantitative findings through qualitative data mining. Theoretically, this design is relevant to the andragogical perspective that emphasizes the subjective learning experiences of adult learners (Wang et al., 2025). This approach is also suitable for answering research questions that not only require the measurement of SDL levels but also an understanding of the factors that influence them. The conceptual framework of this study refers to the self-directed learning model, which includes the dimensions of learning awareness, learning strategies, learning activities, self-evaluation, and interpersonal skills.

The participants in this study were 262 preservice teachers from the Arabic Language Education Study Program at UIN Raden Mas Said. The respondents came from four intake years, namely 2020, 2021, 2022, and 2023, reflecting diverse academic experiences and stages of study. By gender, the majority of respondents were female, in line with the study program's demographic characteristics. The respondents ranged in age from 18 to 23, indicating that they belonged to the early adult learner category. The sampling technique used was purposive, with the criterion that participants had actively enrolled in and completed at least the foundational core language courses offered in the program, such as introductory courses in listening, speaking, reading, and writing. Although students from different intake years had varying levels of academic progression and course completion, all participants had experienced the fundamental Arabic language learning process in higher education, making them relevant to the objectives of this study. This technique was chosen for its academic relevance and for the suitability of the respondents' characteristics to the research objectives. Based on this composition, the sample was considered representative of the profiles and learning tendencies of preservice Arabic language teachers.

The main instrument of this study was an SDL questionnaire developed based on an adaptation of the SDL instrument used in previous studies, namely the SRSSDL developed by Williamson (2007) and adapted to the context of Arabic language learning. The questionnaire consists of 60 statements covering the five main dimensions of SDL, namely learning awareness, learning strategies, learning activities, self-evaluation, and interpersonal skills. Each item is measured using a five-point Likert scale, ranging from

strongly disagree to strongly agree. The instrument's validity was assessed using the Pearson Product-Moment correlation, and most items met the eligibility criteria.

Table 1. The validity instrument

Item	r-hitung	Sig. (2-tailed)	Keterangan
A1	.604**	.000	Valid
A2	.515**	.000	Valid
A3	.296*	.022	Valid
A4	.688**	.000	Valid
A5	.560**	.000	Valid
A6	.736**	.000	Valid
A7	.609**	.000	Valid
A8	.655**	.000	Valid
A9	.033	.803	Tidak Valid
A10	.457**	.000	Valid
A11	.644**	.000	Valid
A12	.694**	.000	Valid
LS1	.333**	.009	Valid
LS2	.517**	.000	Valid
LS3	.505**	.000	Valid
LS4	.492**	.000	Valid
LS5	.511**	.000	Valid
LS6	.442**	.000	Valid
LS7	.528**	.000	Valid
LS8	.331**	.010	Valid
LS9	.643**	.000	Valid
LS10	.497**	.000	Valid
LS11	.558**	.000	Valid
LS12	.551**	.000	Valid
LA1	.647**	.000	Valid
LA2	.602**	.000	Valid
LA3	.664**	.000	Valid
LA4	.697**	.000	Valid
LA5	.720**	.000	Valid
LA6	.534**	.000	Valid
LA7	.651**	.000	Valid
LA8	.707**	.000	Valid
LA9	.400**	.002	Valid
LA10	.652**	.000	Valid
LA11	.666**	.000	Valid
LA12	.254	.050	Valid

E1	.512**	.000	Valid
E2	.566**	.000	Valid
E3	.686**	.000	Valid
E4	.666**	.000	Valid
E5	.568**	.000	Valid
E6	.622**	.000	Valid
E7	.633**	.000	Valid
E8	.680**	.000	Valid
E9	.634**	.000	Valid
E10	.620**	.000	Valid
E11	.595**	.000	Valid
E12	.649**	.000	Valid
IS1	.574**	.000	Valid
IS2	.709**	.000	Valid
IS3	.533**	.000	Valid
IS4	.555**	.000	Valid
IS5	.550**	.000	Valid
IS6	.672**	.000	Valid
IS7	.524**	.000	Valid
IS8	.589**	.000	Valid
IS9	.728**	.000	Valid
IS10	.707**	.000	Valid
IS11	.560**	.000	Valid
IS12	.200	.125	Tidak Valid

The reliability of the instrument was analyzed using Cronbach's Alpha, which showed a very high level of internal consistency with a value of 0.940. In addition to quantitative instruments, this study also used guided group discussion guidelines to explore qualitative data. The guidelines were semi-structured to allow for in-depth exploration of the respondents' independent learning experiences

Table 2. Instrument reliability

Cronbach's Alpha	N of Items
0,940	60

The data collection process was carried out in stages and systematically. In the quantitative stage, questionnaires were distributed online through a digital platform to all respondents who met the criteria. The questionnaires were completed within two

weeks to ensure an optimal response rate. After the initial analysis of quantitative data was conducted, the qualitative stage was carried out through focus group discussions (FGD) with a number of selected respondents. The selection of FGD participants was based on variations in SDL levels identified from the survey results, in which participants were purposively selected to represent high, moderate, and low SDL categories in order to capture diverse learning experiences and perspectives. All participants were given an informed consent form before participating in the study. The researchers guaranteed the confidentiality of the respondents' identities and emphasized that participation was voluntary without academic consequences. This procedure was carried out to comply with the principles of educational research ethics.

Quantitative data were analyzed using descriptive statistics to describe the level of SDL in each dimension. The analysis was performed using the latest version of SPSS software. Qualitative data from the FGD were analyzed using thematic analysis, which involved open coding, categorization, and extraction of main themes. In a sequential explanatory design, the results of qualitative analysis were used to interpret and reinforce quantitative findings. Data integration was carried out at the interpretation stage to produce a complete and contextual understanding. This analytical approach was chosen so that the research results would have empirical strength and interpretative depth.

Result and Discussion

SDL of Arabic Pre-Service Teacher in Improving Arabic Language Competence

This section presents the results of descriptive statistical analysis of the level of Pre-Service Arabic teachers SDL in the Arabic Language Education Study Program (PBA) to improve Arabic language competence. Data were obtained from 262 respondents through a questionnaire covering five main SDL constructs, namely self-awareness, learning strategies, learning activities, evaluation, and interpersonal skills. The analysis was conducted to describe the general trends in students' SDL levels for each construct based on the mean and standard deviation. This approach enabled the researchers to identify aspects of SDL that had developed well and those that still needed strengthening. These descriptive statistical results provided a basis for comprehensively

understanding the patterns of independent learning among PBA students. A summary of the analysis results is presented in the following table:

Table 3. Descriptive Statistics

Construct	N	Mean	SD
Awareness	262	3.3483	0.61247
Learning Strategies	262	3.7113	0.60908
Learning Activities	262	3.1824	0.66526
Evaluation	262	3.4779	0.71466
Interpersonal Skills	262	3.1874	0.74034

Based on Table 2 the SDL level of PBA students shows quite clear variations in the five constructs measured. The learning strategy construct had the highest mean value ($M= 3.7113$; $SD= 0.60908$), indicating that students were relatively capable of independently designing and applying learning strategies to improve their Arabic language competence. This finding shows that students were accustomed to utilizing structured learning approaches, such as group discussions, simulations, and interactive learning. The evaluation construct ranked second with a mean value of 3.4779, reflecting students' ability to reflect on their learning outcomes. However, the relatively higher standard deviation indicates variation among individuals in conducting self-evaluation. In general, these two constructs reflect students' main strengths in the aspects of planning and reflection on independent learning.

In contrast, the constructs of awareness, learning activities, and interpersonal skills showed relatively lower average scores. Students' learning awareness had an average score of 3.3483, indicating a moderate level of self-awareness regarding the needs and processes of learning Arabic. This shows that although students feel responsible for their learning, their internal motivation to study consistently outside of formal classes is not yet fully optimal. The learning activity construct obtained an average of 3.1824, which shows that student involvement in independent learning activities still varies. This value indicates limitations in active learning practices, such as asking critical questions or making maximum use of technology. Thus, independent learning activities are one aspect of SDL that still needs to be strengthened.

The results of the evaluation construct show that Arabic students are quite open to the feedback process in learning. Students show a positive tendency towards experience-based evaluation, both from success and failure, as well as from peer feedback. However, their self-evaluation skills before receiving external input are still relatively low, as reflected in the considerable variation in scores. This indicates that students tend to rely on external assessment rather than self-reflection. This condition indicates the need to strengthen metacognitive skills so that students are more confident in assessing their own learning progress. With improved self-evaluation skills, students are expected to be able to manage their Arabic language learning more independently and sustainably.

The interpersonal skills construct also showed results that require special attention. Although students showed a positive tendency to build social relationships and share information with others, their verbal and written communication skills were still relatively low. Lower average scores in this aspect indicate barriers to expressing ideas orally and in writing. In fact, interpersonal skills are an important component in language learning, especially Arabic, which emphasizes communicative skills. Low scores in the communication aspect indicate the need for more collaborative and communicative learning strategies. Overall, the results of this study show that PBA students have a fairly good foundation in SDL, especially in learning and evaluation strategies, but still need strengthening in the aspects of awareness, learning activities, and interpersonal skills so that Arabic language learning can take place more optimally and holistically.

Factors Affecting SDL of Students Pre-Service Arabic Teachers in Improving Arabic Language Competence

Based on the results of the Focus Group Discussion (FGD), students' self-directed learning (SDL) in improving Arabic language competence was influenced by three major categories of factors, namely individual factors, environmental factors, and institutional factors. Individual factors included self-efficacy, learning motivation, cognitive competence, and metacognitive skills. Environmental factors encompassed social support and learning conditions at home and on campus, including access to technological resources. Meanwhile, institutional factors involved lecturers' teaching

strategies, the availability of supporting facilities, and assessment and feedback systems. These factors interacted dynamically and collectively shaped students' independent learning experiences in developing Arabic language competence. The findings indicate that SDL is not merely an individual process but is simultaneously influenced by personal, social, technological, and institutional contexts.

Individual Factors

Individual factors were found to strongly influence students' ability to engage in independent Arabic learning. Participants reported that self-efficacy played an important role in determining their confidence and persistence in learning Arabic outside the classroom. Several students explained that classroom instruction alone was often insufficient to meet their learning needs, encouraging them to study independently. As expressed by one participant:

"I usually study Arabic independently after class because I feel the classroom explanation alone is not enough for me to fully understand the material."

This finding suggests that students with higher learning confidence tend to demonstrate stronger learning autonomy and initiative.

In addition, learning motivation emerged from both internal and external factors. Some participants acknowledged that peer comparison encouraged them to improve their Arabic competence independently. One participant stated:

"Seeing my friends speak Arabic more fluently motivates me to study harder independently because I do not want to fall behind."

Peer support also contributed significantly to students' confidence in SDL. Participants who had academically supportive peers felt more motivated and comfortable discussing difficulties encountered during independent learning. As one participant explained:

"Having friends who are better in Arabic helps me a lot. I can ask questions whenever I face difficulties, and that makes me more confident to continue learning independently."

Furthermore, students emphasized the importance of metacognitive abilities, particularly time management, learning planning, and self-evaluation. These skills enabled students to maintain consistency in independent learning activities. One participant reflected:

“Without planning my study schedule, it is difficult to stay consistent in learning Arabic independently.”

This finding indicates that metacognitive regulation is an essential component in strengthening students’ SDL effectiveness.

Environmental Factors

Environmental factors also played a significant role in supporting students’ independent learning. Family support, including emotional encouragement, financial assistance, and learning facilities, helped students focus more effectively on their learning process. One participant noted:

“My family always gives me time and support to focus on studying. They also provide internet access and learning facilities, which really help my independent learning process.”

Peer interaction likewise contributed positively to SDL development. Participants explained that collaborative discussions with classmates increased both motivation and opportunities for knowledge exchange. As stated by one participant:

“Discussing Arabic assignments with friends motivates me to keep learning because we can exchange ideas and encourage each other.”

A conducive learning environment at home and on campus was also perceived as an important supporting factor. One participant explained:

“A quiet and comfortable environment at home helps me concentrate more when practicing Arabic speaking and listening.”

In addition, constructive feedback from lecturers was considered essential in strengthening students’ motivation and learning awareness. A participant stated:

“When lecturers provide constructive feedback, I become more motivated to improve my Arabic skills independently because I know which parts I need to develop.”

Students also emphasized that involvement in Arabic-language communities and extracurricular activities increased their confidence and their opportunities to practice Arabic in authentic contexts. One participant explained:

“Joining Arabic language communities gives me more opportunities to practice speaking and increases my confidence in using Arabic outside the classroom.”

These findings demonstrate that SDL development is strongly influenced by supportive social interactions and conducive learning environments.

Technological and Institutional Factors

Technology and institutional support were identified as other important determinants in strengthening students' SDL. Participants reported actively using various digital resources, such as language-learning apps, online videos, and reference materials, to support independent learning. One participant stated:

“I often use YouTube videos, language learning applications, and online dictionaries to improve my Arabic skills because they are flexible and easy to access anytime.”

However, several students acknowledged that the availability of authentic and interactive Arabic learning materials remained limited. One participant commented:

“Sometimes it is difficult to find authentic and interactive Arabic learning materials that match our learning level.”

From an institutional perspective, participants perceived that lecturers' teaching strategies were not always adaptive to students' varying learning abilities and needs. One participant explained:

“Some lecturers still use conventional teaching methods, so students who have different learning speeds sometimes struggle to learn independently.”

Limited institutional facilities, such as language laboratories and e-learning platforms, were also considered barriers to SDL implementation. As expressed by one participant:

"Limited access to language laboratories and online learning platforms makes it harder for us to practice Arabic independently outside class hours."

Finally, students highlighted the importance of formative assessment and regular feedback in supporting reflective learning and learning autonomy. One participant stated:

"I expect lecturers to provide more regular feedback because it helps me identify my weaknesses and improve my independent learning strategies."

Overall, these findings indicate that strengthening SDL requires not only students' personal readiness but also technological support, responsive teaching strategies, conducive learning environments, and institutional systems that facilitate reflective and autonomous learning processes.

The results of the study indicate that students have a relatively good level of learning awareness, particularly in identifying learning needs and developing learning plans. These findings are in line with the concept of SDL proposed by Knowles (1977), which emphasizes the responsibility of adult learners for their learning process. However, despite their good learning awareness, students' motivation for independent learning outside the classroom remains low. Most students tend to study only when instructed by lecturers and are not yet actively updating learning resources independently. This condition differs from the findings of Doo et al. (2023), which show that students with high SDL levels are more proactive in seeking additional learning resources. Therefore, increasing independent learning motivation is an important means of strengthening students' learning awareness (Kanyopa & Makgalwa, 2024; Li et al., 2021).

In terms of learning strategies, students demonstrated strength in collaborative strategies, particularly through group discussions and learning simulations. Active participation in group discussions was the most dominant strategy and was perceived as beneficial by students. These findings support the research by Y. Yang et al. (2025),

which states that collaboration and social interaction are important elements in SDL, especially in foreign language learning. However, the use of independent learning strategies such as concept mapping and individual learning routines is still relatively low. In fact, Henderson (2024) emphasizes that concept mapping is effective in helping students understand language structure and the interrelationships between concepts. This indicates the need to strengthen more structured and reflective learning strategies.

The use of digital technology has also become part of students' learning strategies, although still at a moderate level. Some students have used language learning applications and video tutorials to support independent learning. These findings are in line with Zhang & Zou (2022), who stated that digital technology can improve language skills if used in an organized and sustainable manner. However, in the context of this study, technology has not been fully integrated into students' learning routines. Therefore, guidance is needed so that students can make better use of technology as part of their SDL strategies.

In terms of learning activities, students showed sufficient engagement in reviewing the material but were still not very active in asking questions during the learning process. Low participation in asking questions indicates limited cognitive and reflective engagement on the part of students. Lee (2014) asserts that the ability to ask questions is an important indicator of active engagement in language learning. In addition, students still have difficulty connecting theory with the practical use of Arabic in real-life contexts. This condition indicates a gap between conceptual and applied knowledge, as also highlighted by du Plessis et al. (2025) in the context of SDL.

In terms of self-evaluation, students still rely heavily on external feedback, especially from lecturers and peers. Their ability to reflect and assess themselves independently has not yet developed optimally. These findings reinforce Williamson (2007) view that self-evaluation is a crucial component of SDL that remains a challenge for many learners. Nevertheless, students greatly appreciate constructive feedback from lecturers and peers, which has been proven to improve understanding and motivation to learn. This is in line with Hrabalová & Urban (2024), who emphasize the importance of external feedback as an initial reinforcement in the development of independent learning.

Students' interpersonal skills are relatively good in the context of group work and collaboration, but they are still weak in verbal and written communication in Arabic. Lack of confidence and opportunities for practice are the main factors contributing to low active communication skills (Kuźniak et al., 2016; Y.-F. Yang, 2016). In addition, the ability to express ideas in writing in Arabic still needs to be improved. Ghasemi & Norris (2024) emphasize that interpersonal skills in SDL not only include social interaction but also the ability to convey ideas effectively, both verbally and in writing. Therefore, strengthening Arabic literacy is an urgent need.

The success of pre-service Arabic teachers' SDL is influenced by individual, environmental, and institutional factors. Self-efficacy has been shown to play an important role in increasing motivation and engagement in independent learning (Alemayehu & Chen, 2023; Bedi, 2023). Social environmental support, such as family and peers, also strengthens learning motivation (ALAWAWDA & RAZI, 2020; Jin et al., 2022). However, limited campus facilities and traditional teaching approaches are major institutional obstacles. Therefore, this study emphasizes the importance of interactive and differentiated learning methods and digital facility support. Thus, the synergy between individual, environmental, and institutional factors is key to improving the effectiveness of self-directed learning among pre-service Arabic teachers.

Conclusion

This study concludes that Arabic pre-service teachers' self-reported SDL skills show considerable potential but are not yet optimally developed, based on their own perceptions. Students reported relatively strong learning awareness and collaborative skills, especially in identifying learning needs and participating in group discussions. However, their perceived levels of independent learning motivation, self-evaluation, and the ability to integrate Arabic language theory and practice were still at a moderate level. These findings suggest that, from the students' perspective, SDL in Arabic language learning is not solely determined by learning awareness but is also associated with mastery of structured learning strategies, use of digital technology, and self-reflection skills. In addition, individual factors such as self-efficacy were perceived to play an important role in increasing student engagement in independent learning activities; students with higher self-reported confidence tended to be more active in seeking

additional learning resources and reported greater efforts in developing their language competencies. As the study relied on self-reported data regarding SDL skills rather than direct measurement of SDL application or its impact on Arabic proficiency, these conclusions should be interpreted as reflecting students' perceptions. Thus, this study enriches the development of SDL theory in the context of foreign language learning, particularly Arabic, by emphasizing the importance of the interaction between cognitive, affective, and contextual factors as reported by learners themselves.

In practical terms, the findings of this study show that the success of student SDL is greatly influenced by environmental and institutional support. Faculty support through interactive, collaborative, and project-based learning strategies has been shown to encourage more active learning engagement. Conversely, learning approaches that are still predominantly traditional tend to limit the development of student learning independence, especially for those with low basic Arabic language skills. Limited learning facilities, such as access to language laboratories and digital platforms, also pose significant obstacles to optimizing SDL. Therefore, higher education institutions need to develop policies that support the systematic integration of SDL, including the provision of quality digital learning resources and differentiated teaching methods. Another practical implication is the need to strengthen training in independent learning strategies and self-evaluation for students. With adequate institutional support, SDL has the potential to become a strategic approach to sustainably improving Arabic language competence.

Although it makes a significant theoretical and practical contribution, this study has several limitations. Data collection, which largely relied on questionnaires and Focus Group Discussions (FGDs), may not fully represent the dynamics of SDL in everyday learning practices. Furthermore, the research context, which was limited to one educational institution, restricts the generalization of findings to a broader context. Therefore, further research is recommended to use a more comprehensive mixed methods approach by combining surveys, classroom observations, and in-depth interviews. Further research also needs to explore more innovative uses of digital technology, such as Artificial Intelligence-based learning, learning analytics, and gamification in SDL development. In addition, the role of family support and the social environment outside the campus needs to be studied in greater depth. Further studies

involving policy makers and educational institutions are expected to produce a more integrated and sustainable SDL implementation model in Arabic language learning in higher education.

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