# Determinants Associated with Self-Directed Language Learning of Thai EFL Context: A Review for Future Research on Thai High School Education

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**Abstract**
Self-directed language learning is considered as one of the most important aspect of learning process leading to individual's success in learning and working life. The systematic review study aims to explore the determinants associated with self-directed language learning of Thai EFL context, which have been carried out for a past decade between year 2013-2023. Gough's strategy was used as a guide for the research method. The findings of relevant research articles for this study reveal the critical determinants influencing on self-directed language learning, which include digital literacy, mindfulness meditation and practices, teachers' roles and teaching approaches, and adversity quotients. The study discusses limitation of this study and recommends future research on implication of the relevant determinants in developing instructional innovation.

Keywords: Determinant; self-directed language learning; Thai; EFL; systematic review

**Introduction**
The Thai Government established the 20-Year National Strategy (2017–2026), determined as "Thailand 4.0", to thrive in the 21st century and become a developed country through a roadmap consisting of six main strategies. Reforming the economic and social sector towards sustainability is the main focus policy of Thailand 4.0 (Ministry of Industry, 2017) The strategy aims to promote innovation and research-oriented studies, leading Thailand to become a knowledge-based society (Buasuwan, 2018). Thai educational sectors and institutes must harmonize modernized student-centered pedagogical approaches underlining real-life situation and phenomena to accomplish the

desired knowledge-based society (Scott & Guan, 2022). Students are urged to seek information independently, take initiative, concentrate on skill development, and have a positive outlook on lifelong learning. As a result, students must participate in the design of learning management, learning assessment, and constructing and changing knowledge through various pedagogical tools and platforms (Boonphak, 2020).

To be in line with the national agenda of Thailand, one of educational strategies is to equip students to use the global language effectively and competently. Numerous studies have revealed that proficiency in English becomes one of the critical factors in one's performance in both the classroom and the workplace (Anthony, 2018; Dafa-Allah, 2012; Lodhi, Shamim, Robab, Shahzad, & Ashraf, 2018). Thus, communicative proficiency, learner-centeredness and self-directed learning have been prevalent in the mainstream of language leaning and teaching (Chung & Wei, 2020).

According to the attempt of economic shift and rapid knowledge development of the country, people change how they live and view the world since they must learn to live on their own and rely less on other people. It also affects the role of the students, as they need to take responsibility for their learning, adjust to dynamic changes, and take the initiative to address problems on their own which is called as self-directed learning (SDL) in which the more vigorous students would have a better chance of surviving.

Knowles (1975) described SDL as a stage in which individuals ascertain their needs for learning, their goals for learning, the resources they have—both human and mental—to study, choose and use efficient study techniques, and evaluate their progress—either alone or with the help of others. Song & Hill (2007) stated that self-directed learning practice is not restricted to traditional schools and universities, among other educational establishments. Learners who complete their learning projects and online courses are among the most self-directed learners.

According to several research studies, self-directed learning is considered as a driving factor that makes learners become autonomous and successful learners (Dwilestari, Zamzam, Suanti & Syhrial, 2021; Gharti, 2019). However, the previous research studies found that there have been several determinants, and factors influencing one's self-directed learning. Tough (1971) found that adults invest a lot of time on educational projects. Brockett's (1985) study revealed that adult self-directed learning is impacted by education, life quality, and independence, yet chronological age is not irrelevant. While Hutto (2009) found that gender and age have a big impact on self-directed learning. In language instruction, a study by Zarei and Ashtiani (2016) showed that persuasion-based instruction can improve self-regulation in language learning among intermediate-level Iranian EFL learners. Du's (2013) study indicated that the roles of the teacher have a critical influence on different levels of self-directed learning performance of students in writing tasks with completing portfolios. The teachers may need to alternate between the roles of decision-maker and facilitator depending upon the dynamic needs of students. In 1977, Guglielmino's definition of self-directed learning readiness has been prevalent in pedagogy, including eight factors: openness to learning opportunities, self-concept as an effective tool, initiative and independence in learning, informed acceptance of responsibility for one's own learning, love of learning, creativity, positive orientation to the future, and ability to use basic study skills and problem-solving skills. This shades the light on challenging of how to measure self-directed learning readiness or competencies because self-directed learning might not be as common in certain environments or social and cultural contexts.

To understand more about self-directed learning improvement and to promote it among EFL learners to be aligned with the country's strategic development, it is important to explore the determinants or factors affecting self-directed learning readiness or competencies among Thai EFL learners using a systematic review. Consequently, the present review study aims to explore and propose the critical factors associated with self-directed learning competencies so that educators' awareness in facilitating learners' self-directed learning development and enhancement may be raised.

**Research method**

This study conducted the systematic review method, with data analysis, which applied Gough et al (2012) allowing for collecting relevant studies and analyzing them systematically, and it aimed to set the ground for future research regarding self-directed language learning for Thai high school education. The search for data used in the current study included five steps;

*(1) Generating a set of keywords* for conducting a search in the databases, the single word or the phrases were adopted as keywords; namely, factors or determinant or self-directed learning or self-direction in learning or self-regulated learning or learner autonomy or autonomous learning or learning strategy or Thai EFL.

*(2) Setting databases*, the three relevant academic databases which were employed for searching in the study include Science Direct, ERIC, and Google Scholar. Based on this step, there were 142 articles from ERIC, 39 articles from Google Scholar, and 13 articles from Science Direct.

*(3) Developing criteria*, to be included in the reviewing step, the journal articles selected to focus on the following selection criteria: (a) published between 2013 to 2023, (b) peer-reviewed, (c) full text available, (d) published in English, (e) with focus on English as a foreign/second language learning. However, if the articles did not meet the criteria, they were disqualified and excluded. A summary of the inclusion and exclusion criteria are provided in Table 1. After determining the criteria, 76 articles were retrieved in this step.

*(4) Screening relevant articles*, the first phase of screening article titles and abstracts has been conducted on the literature that came from the databases to guarantee the articles' quality and relevancy. After that, the full-text articles were chosen for the analyzing phase. The screening step yielded a total of 26 articles.

*(5) Analyzing the relevant articles*, according to the screening step, a total of 26 articles were selected for examination and analysis.

In this study, data were collected, processed, identified, and analyzed as part of a systematic review. A five-step process was used to identify the determinants or factors associated with self-directed language learning as shown in Figure 1.

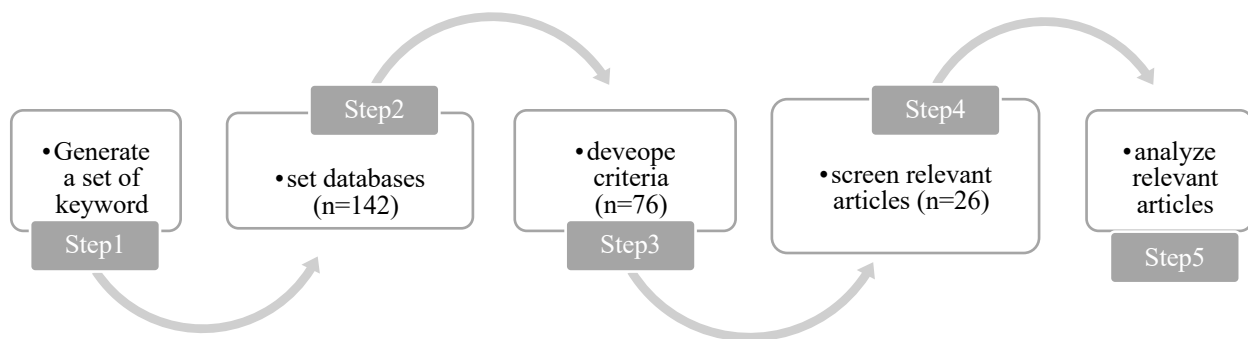| Step1 | Step2 | Step3 | Step4 | Step5 |
|-------|-------|-------|-------|-------|
| • Generate a set of keyword | • set databases (n=142) | • deveope criteria (n=76) | • screen relevant articles (n=26) | • analyze relevant articles |

Figure 1. Procedures for selecting the relevant research articles

Table 1. A summary of the inclusion and exclusion criteria

| Inclusion | Exclusion |
|-----------|-----------|
| -Articles must be published in English & full text between 2013 to 2023. | -Articles did not focus on self-directed language learning studies |

| | |
|---|---|
| -Articles must focus on English as a foreign/second language learning and teaching. | -Articles focused on issues other than EFL/ESL learning and teaching<br>-Articles were written in other languages. |

## Results

This study examined the determinants or factors associated with self-directed language learning to set the ground for future research, based on the systematic literature review method. The 26 research articles retrieved from databases were examined and analyzed, as presented in Table 2. These selected articles studied and presented the determinants and factors associated with self-directed language learning, which were categorized into four themes: including digital literacy, mindfulness meditation and practices, teacher's roles and teaching support, and adversity quotients.

Table 2. Determinants and factors associated with self-directed language learning

| Authors | Research purpose | Participants | Findings/Outcomes | Suggestions |
|---|---|---|---|---|
| Theme: digital literacy | | | | |
| Hayta & Yaprak (2013) | to investigate autonomous language learning activities performed by EFL students the use of computer technology in their self-regulated language learning process. | 75 undergraduate students | -students made use of a good amount of autonomous learning activities, and they benefited from technology in their language learning process to a certain extent<br>-their awareness in learning English was at a satisfactory level | teachers and students can make use of technology in various ways; teachers may prepare learning tools and activities using sites which are available through internet for 24 hours of a day for self-studying. |
| Lai & Zheng (2017) | to explore language learners' self-directed use of mobile devices beyond the classroom | 256 learners at a university in Hong Kong | Learners used mobile devices more for personalizing their learning than for improving authenticity and social connections. | the factors need to be considered when designing mobile learning activities and educational interventions that promote mobile learning beyond the classroom. |
| Sert & Boynuegri (2017) | to examine perceptions about technology use skills and perceptions of their self-directed language learning behaviors | 145 students in grade 5-8 with low and high income | -the low and high income students' perceptions did not differ regarding their own technology use skills<br>-their perceptions on their self-directed learning behaviors did not correlate with their | Conducting research to explore the effects of digital technology on self-directed language learning and how to stimulate self-directed language learning behaviors through digital technology. |

| | | | perceptions on their technology use skills | |
|---|---|---|---|---|
| Bećirović, Brdarević-Čeljo & Delić (2021) | to investigate the use of technology and teacher's support in the process of technology-based learning of EFL learners | 173 high school students | the participants' experience with technology-based language learning (TBL) is rather positive and that teachers have an important role in technology-based foreign language learning, | findings emphasize the need to raise teachers' awareness of the support to be given to students to help them increase their self-directed usage of technology, particularly so outside the official school environment. |
| Ropiah et al (2023) | to determine the effect of the blended learning model based on Google Classroom on student learning outcomes in reading | 60 high school students | learning outcomes of students after using the blended learning learning-based Google Classroom model are 66.67%, which is higher than learning outcome of students who learned with conventional one. | N/A |
| Li et al (2023) | Digital Literacy to investigate the direct effects of Presage-Process-Product model of learning on high school students' online learning engagement | 1993 high school students in China | students' information literacy, self-directed learning skills, and positive academic emotions positively predicted their online learning engagement. Moreover, the positive impact of self-directed learning skills on students' online learning engagement was significantly and largely enhanced through the mediation effects of positive academic emotions | very important to develop students' self-directed learning skills. Teachers should create a harmonious and independent online learning atmosphere for students, so as to stimulate students' motivation to actively engage in learning |
| Theme: mindfulness meditation and practices | | | | |
| Morgan & Katz (2021) | to investigate the effect of mindfulness meditation intervention on foreign language classroom anxiety and what | 142 postsecondary level students | Mindfulness meditation showed potential benefits, particularly for the most anxious participants while it did not serve as a definitive remedy for foreign | targeted MMs for language learners could be a meritorious area of investigation, such as MMs in the target language. |

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|---|---|---|---|---|
| | opinions language learners have toward mindfulness meditation as a way of alleviating foreign language classroom anxiety. | | language classroom anxiety. It contributed positively to their overall language learning experience | |
| Skelly & Estrada-Chichon (2021) | To investigate the impact of mindfulness on obligatory secondary education student's ability to regulate their attention, emotion, behaviour, and thinking. | 12 research papers associated with mindfulness and education | mindfulness could be a highly effective strategy for improving the ability of obligatory secondary education students to learn EFL. | the authors recommend that education system seriously consider implementing mindfulness as a technique for obligatory secondary education student to learn to self-cope with their state of mind and improve adolescent mental health. |
| Drewery, Stewart & Wilson (2022) | to examine the association between greater engagement in mindfulness exercises administered in large university lectures and students' writing self-efficacy. | 147 first-year students studying applied health sciences | There was a significant increase in writing self-efficacy for participants with mindfulness exercises intervention | -long-term implications of students' engagement in mindfulness activities. -mindfulness meditation for one semester improve writing self-efficacy in the next semester? -students' traits, classroom social conditions, and instructor attitudes influence student engagement in mindfulness pratices |
| Wang et al (2023) | to examine the role of students' achievement emotions and technological self-efficacy in predicting their technology | 380 Chinese students | Chinese L2 students' achievement emotions and technological self-efficacy are significant predictors of their technology acceptance | -the impact of culture and other psycho-emotional factors on EFL students' technology acceptance |

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|---|---|---|---|---|
| Fayerberger (2023) | to check whether learning mindfulness in the EFL classroom would create positive attitudes towards students' English learning experience | 32 high school students in grade 12 | -most of the class felt that the mindfulness program was useful and enjoyed participating in the meditations<br>-most of the class felt that the mindfulness program was useful and enjoyed participating in the meditations | -social emotional learning programs implementing in the EFL classroom<br>-EFL classrooms provide teachers and students with new life-long skills and make foreign language learning more meaningful and purposeful.. |
| Alomari (2023) | to assess the degree of mindfulness among university students based on their gender and academic achievement level. | 489 male and female students from public universities | -a moderate degree of mindfulness in each of the five areas, with no discernible gender disparities.<br>-students who performed better academically showed more indifference. | -how mindfulness affects academic performance, ---<br>-experiments and university records for student achievement data can be inflated by self-esteem. |
| Çiçek & Gürbüz (2023) | to investigate how an EFL teacher's mindfulness training transforms her interactions with students, resilience and wellbeing. | An EFL teacher with mindfulness training for one term | The EFL teacher has noticed beneficial changes in her teaching, found it easier to manage stress both inside and outside the classroom, and observed better student-teacher interactions with fewer conflicts. | N/A |
| Theme: teacher's roles and teaching approaches | | | | |
| Lai (2015) | to investigate and model the teachers' influence on a group of foreign language learners' self-directed technology use outside the classroom. | 179 undergraduate students | The results highlight the necessity of raising instructors' understanding of their diverse responsibilities and enhancing their ability to carry them out in order to support students' independent use of technology for learning outside of the classroom. | -more research to understand how teachers influence learners' self-directed use of technology<br>-exploring effective methods for teachers to encourage students to use technology for learning outside the classroom. |
| Lai et al (2017) | to explore how different teacher practices interact with other psychosocial factors to influence foreign | 418 undergraduate foreign language learners | teacher capacity support was consistently the most influential teacher practice affecting students' self-directed technology use across | the results might be different for different subject matters and for K-12 students |

| | language learners' self-directed use of technology for language learning outside the classroom | | the two cultures, whereas teacher affective support and teacher behavior support were significant predictors for Hong Kong students but not for U.S. students. | |
| --- | --- | --- | --- | --- |
| Sarwono, Murtono & Widianto (2020) | aim to analyze the role of teachers in developing students' social attitudes. | students of grade 5 at SD 2 Tenggeles | Students in SD 2 Tenggeles have a generally positive social attitude. Therefore, the teacher's role in forming students' social attitudes is crucial for application in the classroom, home, and community settings. | N/A |
| Pan & chen (2021) | to explore the contributions of teacher supports to students' self-directed language learning and investigate whether three variables mediated these associations | 197 freshmen students in one university in Eastern China | teacher supports influenced students' self-directed language learning mainly through perceived usefulness and technological self-efficacy while perceived ease of use had indirect mediating functions by directly influencing perceived usefulness. | Students are highly motivated to study languages on their own outside the classroom. To boost their technology-based self-directed learning, teachers should encourage positive interactions and stimulate psychological factors. |
| Hao & Razali (2022) | to explore the effectiveness of peer feedback on Chinese EFL junior high school students' writing ability and self-efficacy | 100 grade 9 EFL students in a Chinese public junior high school | -peer feedback positively impacts students' writing ability in content, organization, and grammar.<br>- students have more positive attitudes toward peer feedback which is more conducive to improving the students' writing self-efficacy in motivation and confidence. | Teachers should adequately play their role of organizer, helper, observer, and person to give timely feedback to students, create a positive classroom atmosphere, optimize the writing feedback, and stimulate students' motivation and confidence. |
| Baa, Maghfirah & Borland (2023) | to explore and students' satisfaction level | 77 EMI students and 84 non-EMI | EMI and non-EMI programs have | Students were satisfied with the EMI program due to |

| | toward and factors that may detract from EMI programs | students at the public secondary school level | significant differences in their preferences. EMI students preferred the EMI program and non-EMI students preferred non-EMI programs. | its benefits. For successful implementation, it needs qualified bilingual teachers, a more English-focused environment, and adequate bilingual materials. |
|---|---|---|---|---|
| Razzaq & Hamzah (2023) | to investigate the impact of metacognitive writing strategy on writing performance among Pakistani ESL learners | students in public universities in Pakistan | the use of monitoring as a metacognitive writing strategy has the potential to enhance the inclination to engage in writing activities among English as a Second Language learners from Pakistan. | Metacognitive writing strategies, especially evaluation, improved the writing skills of Pakistani ESL learners. Both students and teachers should use these strategies to enhance writing proficiency. |
| **Theme: adversity quotients** | | | | |
| Zafari & Biria (2014) | to determine the influence of emotional intelligence on the choice of learning strategies. | 100 Iranian EFL students | -Iranian EEL learners used metacognitive strategies the most and affective strategies the least. -Emotional intelligence is strongly linked to language learning strategies. -Emotionally intelligent students use more strategies than less intelligent ones. | -Language policymakers and curriculum developers should create opportunities for students to learn and enhance their emotional intelligence. -Teachers can use various techniques to help students improve their emotional intelligence in language classes. |
| Genç, Kuluşaklı & Aydın (2016) | to examine the role of emotional intelligence in second language learning and its effect on productive language skills | 150 undergraduate students studying EFL | A positive and close relation between EQ and foreign language proficiency can be drawn out | Teachers should focus on activities that enhance emotional intelligence to help students achieve academic success. This can improve students' writing and speaking skills. |
| Zamnah & Ruswana (2019) | to investigate and to describe the improvement of | first-year students | the learning method using self-directed learning affected the | N/A |

| | self-regulated learning and self-confidence between two classes of students who implemented different learning model | | improvement self-regulated learning and self-confidence on students. | |
|---|---|---|---|---|
| Mwivanda & Kingi (2019) | to investigate the teachers' adversity quotient and its effects on students' academic performance. | 441 secondary school teachers | There is a positive significant relationship between adversity quotient dimension of control and students' academic performance | Policymakers should test and assess teachers' adversity quotient, create support mechanisms, and offer professional development programs to improve teachers' adversity quotient and enhance students' academic performance. |
| Sitsira-at (2020) | to investigate the important of adversity quotient and emotional quotient related to lifelong learning | 1,103 undergraduate students | adversity quotient, emotional quotient and lifelong learning were at rather high level and the positive correlation between students' adversity quotient, emotional quotient and lifelong learning was statistically significant | N/A |
| Samsilayurni et al (2021) | to analyze the effect of intellectual intelligence and Adversity Quotient on learning motivation | 96 state vocational high school students | the higher the level of intellectual intelligence and adversity quotient in students, the more motivating and enthusiastic students are in learning. | Educators can pay attention to and develop intellectual intelligence, the adversity quotient of students in the learning process. |

The findings of the selected research studies reveal several determinants or factors associated with self-directed language learning for Thai EFL learners: including digital literacy, mindfulness meditation and practices, teacher's roles and teaching approaches, and adversity quotients as shown in Figure 2:
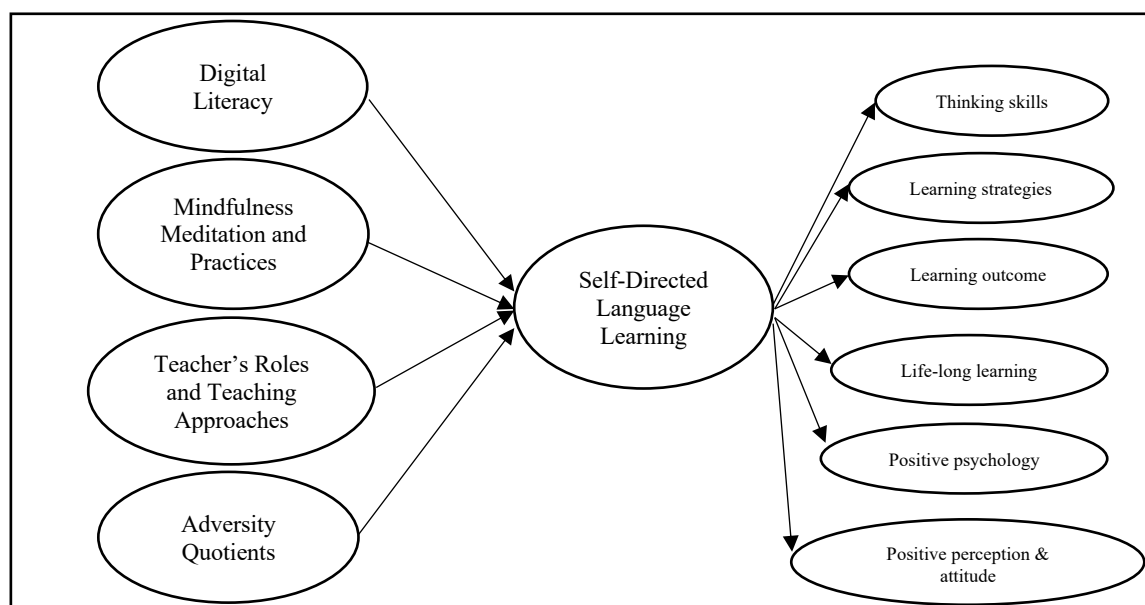
Figure 2. Determinants associated with self-directed language learning for Thai EFL learners

## Discussion

The present systematic review study aims to explore and propose the critical factors associated with self-directed learning competencies, namely digital literacy, mindfulness meditation and practices, teachers' roles and teaching support, and adversity quotients.

Digital literacy

There is a connection between technology competence and self-directed learning. Technology equips learners to have competence in technology, and technology facilitates instruction and supports a student-centered learning environment in which discovery learning and autonomous learners arise. According to the study of Sert & Boynuegri (2017), the results indicate that low- and high-income students indicate that the students with different social backgrounds; low and high incomes have no difference in their perception of their technology use skills as well as their English teachers' use of technology does not differ significantly. This result is predictable since it is obviously phenomena that digital technology is prevalent in all social strata. They live their everyday lives with technology for a variety of purposes such as lifestyles, music, news and so forth. Nevertheless, the most prominent reason might be that it is more problematic for adults to adapt themselves to the digital period, regarding to the age factor as discussed in the part above. Similarly, a study the use of digital technology in foreign language learning by Bećirović, Brdarević-Čeljo & Delić (2021) shows that high school students shared rather positive perceptions towards the use of technology for the purpose of language learning and their connection to language achievement. This study underlines the necessity to promote teachers' awareness in enabling students to increase their self-directed language learning with technology usage, particularly in out-of-school environments. Another research study published in the International Journal of Language Education pointing out the impact of enhancing pedagogical technology on students' self-directed language learning, particularly reading short stories, is the study of Ropiah et al (2023). The study indicates that the learning outcomes of students after using the blended learning learning-based Google Classroom model are 66.67%, which is higher than learning

outcome of students who learned with conventional one. They stated that implementing blended learning model based on Google Classroom can be done face-to-face and online. With online learning, students can study independently at home using gadgets and devices to search for material regarding short stories. Apart from that, the teacher also uploaded several reading materials to Google Classroom so that students can access and read them anywhere and anytime independently. So that students can better understand the material and content contained in a story because students can concentrate more on reading by using intensive reading techniques (reading comprehension).

Mindfulness meditation

Mindfulness is one central determinant that directly influences self-directed learning since it relates to and manages components leading to determining cognitive, psycho-motor, and affective domains. Mindfulness is closely related to increased brain activity, which is associated with regulating attention and fostering positive emotional states, including empathy and prosocial feelings (Lutz et al., 2008). Furthermore, greater successful learning and increased memory capacity have been connected to mindfulness meditation programs. They have been demonstrated to reduce anxiety and increase test scores, which empowers students' coping mechanisms and academic achievement (Roeser et al., 2012; Wang et al, 2023). A study by Fayerberger published in 2023 on teaching mindfulness in the English foreign language classroom to high school students reveals that introducing a mindfulness program into the EFL classroom was not only to make learning English more enjoyable but also to give students a lifelong skill. most students in the research study praised the course and stated that the mindfulness program was the most useful tool they had been taught in high school. One more research study was published in Frontier in Education Journal in 2023 by Alomari, he investigated the degree of mindfulness among university students based on their gender and academic achievement level. The results of the study indicate that gender did not have a significant effect on mindfulness levels. Furthermore, the study revealed that students with higher academic achievement displayed greater mindfulness. However, the relationship between mindfulness and academic achievement was weak, explaining less than 1% of the variance in academic performance. Another research study by Çiçek & Gürbüz (2023) published in Issues in Educational Research focused on exploring the impacts of mindfulness training for an EFL teacher using a narrative inquiry method. The findings reveal that mindfulness has an impact on two dimensions; student-teacher interactions and resilience and wellbeing. According to these previous research studies, mindfulness is positively linked to both learning and teaching in several sides. It is strongly concluded that mindfulness as a core determinant of self-directed language learning in the EFL context.

Teacher's roles and teaching approaches

Teachers play significant social mediators who influence both the quantity and quality of self-directed learning among their students. Teachers have an impact implicitly through role modeling and explicitly through their teaching practices (Katyal & Evers, 2004). Furthermore, these factors display both directly in students' academic and social involvement as well as indirectly in their learning attitudes and learning methods (Davis, 2003). Consequently, teachers' roles must not be neglected in issues of students' self-directed language learning. According to a study in modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom by Lai, published in Computer and Education in 2015, the findings reveal that teaching practices had an impact on students' out-of-class learning behavior with

technology and that different types of teaching practices affected students' self-directed use of technology differently. Later, Sarwono, Murtono & Widianto (2020) investigated the role of teachers in developing students' social attitudes. The findings conclude that the social attitude of students, including honesty, discipline, responsibility, caring, politeness, and self-confidence, is fairly good, which was affected by the teacher's role during practicing instruction. They depicted that social attitudes are observed through student activities in learning such as being honest in doing assignments independently and being responsible for assignments that have been given by the teacher, which must be done promptly. Whereas, the study of Pan & Chen, published in 2021, indicated that teacher support influenced students' self-directed language learning mainly through perceived usefulness and technological self-efficacy while perceived ease of use had indirect mediating functions by directly influencing perceived usefulness. The study of Baa, Maghfirah, and Borland (2023) found that peer feedback enhances students' writing skills in content, organization, and grammar. Moreover, students develop more positive attitudes towards peer feedback, which boosts their motivation and confidence in writing. Baa, Maghfirah & Borland (2023) explored students' satisfaction with English as a medium of instruction and found that students were delighted with EMI program because of its advantages. A more English-focused setting, sufficient bilingual resources, and certified bilingual teachers are necessary for its successful implementation. Razzaq & Hamzah (2023) investigated the impact of metacognitive writing strategy and found that the use of monitoring as a metacognitive writing strategy has the potential to enhance the inclination to engage in writing activities among English as a Second Language learners from Pakistan.

Adversity quotients

An adversity quotient is a capacity of a person to handle challenges and turn obstacles into opportunities. The adversity quotient is one determinant that affects a person's achievement since it links positively with a person's performance. An individual with a high adversity quotient is likely to have high performance. Conversely, those who have never experienced in adversity quotients will rely on others, particularly on parents, classmates, and other people (Huijuan, 2009; Mwivanda & Kingi, 2019). To effectively deal with challenges and achieve their responsibilities in learning, particularly language learning, students need to possess the adversity quotient. By having the adversity quotient, they can control the situation, take advantage of opportunities, and have a greater chance of success (Safii et al, 2021). According to the study of Akbar, Putri, & Rizdanti (2023) about factors that affected the adversity quotient in compiling an undergraduate thesis, the findings reveals that the adversity quotient was significantly associated with intrinsic motivation, self-directed learning readiness, and anxiety, but not with gender. Prasittisrisakul, Sitsira-at, & Piasa (2017) investigated the effect of adversity quotient practice on handwriting scores among first grade students. The result concludes that adversity quotient practice helps students increase their handwriting achievement. Samsilayurni et al (2021) investigated the effect of intellectual intelligence and adversity quotient on learning motivation. The results of the study states that the higher the level of adversity quotient in students, the more motivating and enthusiastic students are in learning.

**Conclusion**

This study aimed to explore the determinants associated with self-directed language learning so as to propose the new components and concept for developing educational innovation.

On the basis of the findings obtained from this study, it is strongly recommended that self-directed language should be raised by combining the following determinants or components.

A number of research studies on implicating digital and technology into several levels of education demonstrates the positive results about the use of technology and teacher's support in the process of foreign language learning. It is obvious to raise teachers' awareness of usage of technology to help learners increase their self-directed language learning, particularly so outside the official school environment.

Aside from the above discussion of mindfulness meditation and practices, it is commonly known as one of the most effective positive psychology which increases prevalence in formal learning environments. In many ways, foreign language classroom anxiety is the opposite of positive psychology, as well as most learners have struggled with it. Consequently, it is necessary to equip students with mindfulness practices and meditation in order that students can better concentrate on tasks and process of learning. In addition, mindfulness influences on lowering stress and anxiety which can affects other factors associated with self-directed language learning, such as adversity quotients, motivation, attitudes and perception, etc.

Teacher's roles and teaching approaches are aspects which play critical role in enhancing students' self-directed language learning. The discussion above provides consideration of teachers' awareness and teaching practices to influence students' perception and attitudes. A quantity of studies depicts how students satisfy with and have positive perception to teachers' role as learning supporters. Therefore, several aspects of learning and teaching become more effective in different contexts.

According to the research studies of adversity quotients, the findings contributes to teachers' instructional practices and implicates students' learning achievement and school performance. Those can be improved through promotion of adversity quotients practices because of its dominant role in affecting several pedagogical agents.

The findings of this study provide meaningful factors effecting on self-directed language learning which become useful for educators; namely policy makers, instructors and staff to utilize the information as initial steps in developing and projecting educational innovation, such as instructional model, teaching approaches, teaching methods, or even techniques according with specific educational and social context.

Despite these implications, this systematic literature review was conducted with qualitative research method and the findings could light on the meaningful dominants associated with self-directed language learning as broad view which suffers its own significant limitations. Consequently, future research needs to investigate the impact of specific dominants or factors with quantitative and mixed method in order that in-depth information can be determined and bridged the information gap of the research filed in self-directed language learning in EFL context.

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