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Improving learner engagement through self-directed language learning (SDLL) in an English for academic purposes classroom

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Highlights

- Implementing SDLL positively affected the development of language competencies in the participants and thereby contributed to learner engagement.
- Majority of the participants preferred SDLL and how they could explore the subject on their own.
- Introducing tailor-made online tools, addressing learner requirements would be helpful for the students to improve their knowledge and to develop the required language competencies.

Article Info: Research

Keywords: English for Academic Purposes, English Language Teaching, Learner Engagement, Online Learning, Self-Directed Language Learning

Abstract

Self-Directed Language Learning (SDLL) which aims at developing learner autonomy, improves learner engagement since learners are able to use higher-level critical thinking. Thus, the present study was conducted in an English for Academic Purposes (EAP) classroom in Sri Lanka, in order to investigate how to incorporate Self-Directed Learning in the EAP classroom to improve learner engagement. In this mixed-method study, pre-tests, post-tests and a questionnaire were used as the research instruments. Additionally, a tailor-made online SDLL tool was provided for the participants to practice SDLL. The collected quantitative data were analyzed using SPSS whereas the qualitative data were analyzed thematically. From the findings of the study, it was evident that implementing self-directed language learning positively affected the development of language competencies in the participants and thereby contributing to learner engagement. In addition, the findings also revealed that a majority of the participants preferred SDLL and they believed it was beneficial for their academic journey since they acquired new language skills. Conclusively, it can be stated that implementing SDLL in the EAP classroom is advantageous for the students to improve their knowledge, whilst enhancing learner autonomy.

1. Introduction

Self-Directed Learning, in which the individual takes control of learning by diagnosing the learning styles and setting goals, is one of the widely discussed concepts in the arena of education. Especially in light of the emergence of a global pandemic, Self-Directed Learning gained paramount importance when online education was practised all across the globe and when learners were supposed to do more independent study than depending on the traditional classroom setting. This also deals with Learner Autonomy, where learners are able to make decisions about their own learning strategy. In language learning too, Self-Directed Learning is being practiced and it is known as "Self-Directed Language Learning" (SDLL).

In the Democratic Socialist Republic of Sri Lanka, English is given the status of more than a lingua-franca and is recognised as a link language in the constitution of the country[†]. In addition, until the introduction

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of "Official Language Act" of 1956, English was the only official language spoken in the country, as a result of being a former colony under British governance (Wickrama, 2011). As a result, English Education in the country is of paramount importance. Elaborating on this, Senaratne (2009) states: "Sinhala is legislated as a medium of instruction in education and the language of written work in the government. English is legislated as a link language. It holds the key to upward social mobility and is a symbol of power and prestige." (p.21).

In the context of higher education in Sri Lanka, most of the undergraduate degree programs especially in Applied Sciences, Medical Sciences, Engineering, Technology and Management Studies are offered in English Medium in the state universities, whereas some of the programs in other streams are still offered in either Sinhala or Tamil medium. However, there is a growing trend for EMI (English Medium Instruction) in the Sri Lankan tertiary education system. Thus, there are various English for Academic Purposes (EAP) courses taught at universities across Sri Lanka, with the aim of improving the academic English language competencies of undergraduates and preparing them for tertiary education.
In addition, independent learning is also expected from the undergraduates except for their mere participation in lectures and evaluations. Hence, realizing the necessity to implement Self-Directed Language Learning in the Sri Lanka context, the current study is conducted to investigate how SDLL can be incorporated in the EAP classrooms in the English as a Second Language (ESL) context in Sri Lanka.

1.1. Research Problem

Whilst being an educator catering for EAP and English for Medical Purposes (EMP) programs for the undergraduates over the years, the researcher has identified that many of the students in medical streams tend to focus more on their mainstream academic subjects that typically have a heavy academic volume to study. Hence, they lack time to allocate to learn English even if the students clearly do have a requirement to improve their English language competencies to be career-ready graduates in the future. Nevertheless, they require the knowledge of English to continue their studies well.

Considering the global pandemic that caused tremendous transformations in the field of education, the necessity of technology has increased far more than ever. Specifically, when students are learning online away from the traditional classroom setting, they have the necessary time, space and technology required to improve their self-directed learning skills. Hence, through this study, it is expected to investigate how a tailor-made e-Learning platform could be incorporated as a Self-Directed Learning Tool to improve the English Language competencies of the students.

Currently, though there are various tools available for ESL learners online, these tools are rarely tailor-made. Moreover, those tools might barely address the needed language requirements of undergraduates who follow English for Academic Purposes (EAP) courses. Therefore, introducing a tailor-made platform that is specifically designed for students learning English for Academic Purposes (EAP) will be favourable for the undergraduates in numerous aspects. Especially, when a tailor-made tool is introduced, the students can learn at their own pace from the comfort of their own home. In addition, engaging in various activities and exploring the further reading material on the tailor-made SDL platform will improve the learner autonomy as well.

Furthermore, in the context of Sri Lanka, there have been only a few studies that had been conducted on Self-Directed Language Learning and Learner Autonomy, such as Premawardhena (2008), Alfred (2015), Ariyasinghe (2019), Dayananda & Yapar (2020), Sudusinghe & Kumara (2020) and Sudusinghe & Kumara (2021). Thus, realizing the existing research gap, Sudusinghe & Kumara (2020) too mention that "There is a dearth of studies conducted on e-learner autonomy among ESL (English as a Second Language) learners in Sri Lanka" (p.138). Further, the authors also state that: "There are some studies conducted all over the world regarding the student perceptions of learning English via distance education. However, only a few studies have been carried out in the Sri-Lankan setting" (Sudusinghe and Kumara, 2020. p.274). Thus, it is

evident that in Sri Lanka, there is a necessity to conduct studies focusing on Self-Directed Language Learning in the ESL setting.

In addition, though a few studies had been done on Learner Autonomy in the ESL context, according to the researcher's knowledge, no study had explored the field of English for Academic Purposes (EAP) in relation to Self-Directed Language Learning in Sri Lanka. Hence, the current study aims to address the research gap by conducting a study focused on Self-Directed Language Learning (SDLL) in the English for Academic Purposes (EAP) context.

1.2. Research Question

Based on the available literature and discussions, it is evident that there is a clear necessity to conduct research on Self Directed Language Learning in the Sri Lankan ESL context. Thus, the following problem is identified as the research question that is to be addressed through this research.

- When incorporating Self-Directed Learning in the context of English for Academic Purposes (EAP) through tailor-made platforms, how do the learners benefit and improve their engagement in the classroom of the English Language Teaching (ELT) field?

1.3 Research Aims

By conducting the present study, the following aims are to be achieved.

- Determining whether the participants had improved their knowledge in relation to the topic addressed through the self-directed language-learning platform
- Investigating the participants' perceptions of Self-Directed Language Learning in the EAP classroom

2. Literature

2.1. Importance of Self-Directed Learning

Self-Directed Learning has been in practice in the field of education for decades. Basically, it deals with how a learner can explore a subject matter on their own whilst taking responsibility for their own learning. Especially in the higher education context, learners are supposed to study on their own, exploring the depths of knowledge.

> "Self-directed learning describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes." (Knowles, 1975, P. 18).

As the author has claimed, a self-directed language learner identifies the need for the learning and the learner himself or herself discovers the best learning strategies to continue their self-directed learning.
Garrison (1997), defines SDL as a "central concept in the study and practice of adult education"(p.18), and the author views SDL in terms of "the collaborative constructivist" perspective and states that when the learning process is a balanced integration of cognition and collaboration, the learning outcomes will be 'personally meaningful and socially worthwhile'. (Garrison, 1997. p.19). Therefore, it can be mentioned that practicing self-directed language learning is aid the learners to develop various other sub-skills that will be integral in their academic and professional careers.
Further, Bosch, Mentz and Goede (2019) also define Self-Directed Learning as "an approach to education where learners take responsibility for their own learning" (p1). Thus, students are able to take control of their own learning process when engaging in SDL. According to the authors, in SDL, the learner selects their own learning strategy with the intention of achieving their desired goals.
Over the years, scholars across the world have realised the value of self-directed learning and they have studied the field with respect to various disciplines. Meanwhile, some scholars have developed various models to analyse self-directed learning and the impact it has on the learner. One of the earliest models

developed for self-directed learning Long's (1989) instructional model for SDL. Since then, there have been many other SDL models, such as Candy's Self-Directed Learning Model (1991), Garrison's comprehensive model (1997) and Oswalt's Model (2003).

2.2. Self-Directed Learning in English Language Teaching

In order to support better language acquisition among learners, SDL can be applied. Hence, across the world, various scholars have explored the possibility of implementing SDL in the language classroom. In the study conducted by Victori and Lockhart (1995), forty out of forty-one participants had achieved some degree of autonomy when SDLL was introduced to them. In addition, the authors state that "Aside from perceiving advantages of SDLL, the learner must also feel comfortable with it. A perception that "this is tailored to me" will usually be a powerful positive affective factor." (Victori & Lockhart, 1995. p. 232)

Further, Sert and Boynuegri (2017), conducting a study from rather an economic perspective, examine the difference of technology use of high -income and low-income groups, considering the perception of 5-8 graders of Ankara, Turkey, in relation to SDLL. Interestingly, the findings of the study mention that irrespective of the income category, the students' perceptions did not differ and the ELT teachers' skills did not differ either. Sert and Boynuegri (2017) state that: "the students' perceptions of their use of technology skills and their self-directed learning behaviours do not interact with each other. In other words, they neither contribute nor counteract one another" (p.31). The authors present this as a thought-provoking finding since it "conflicts with the idea that the new technologies have profound effects on self-directed learning in the ELT classroom." (p.31). However, these findings might differ if the same study was done in the post-pandemic era since technology has overpowered the traditional means of education.

In addition, a recent study by Parisi (2020) focused on how SDLL can benefit Latinx beginner English Language Learners (ELL). Stating that beginner Latinx ELLs are not reaching their desired learning outcomes, Parisi (2020) suggests that "a curated website of effective SDL practices geared towards beginning adult ELLs, and local resources to practice them, could be an effective tool for ELLs to increase their learner outcomes." (p.39) Further, author also emphasises that a tool as such with links added to other local and online sources supports the learner autonomy to continue learning at their own pace, in a time convenient to them. Therefore, it is evident that a tailor-made website that addresses learners' requirements supports learners to reach the intended learning outcomes.

In the Asian ELT context, the study done by Curry, Mynard, Noguchi and Watkins (2017) evaluates a self-directed language learning course offered to first-year students in an international university by the means of an end-of-course questionnaire and by analysing the work completed by the participants to determine whether the participants had acquired the intended learning outcomes at the end of the course. From the findings, it was evident that the students were motivated to learn and the course has influenced the way they think about learning. The participants had claimed that through this course, they have learned the way of learning and they were able to find effective strategies to continue their way of learning. Hence, the procedure of SDLL to learn ELT supported the students to learn various practical skills that are indeed beneficial for them throughout their academic and professional journeys.

Further, in a more recent study conducted in Indonesia, Dwilestari, Zam Zam, Susanti & Syahrial (2021) state that two main factors contribute to the SDLL experience of the students. These are Learning Environment and Motivational Factors, which are inclusive of teachers-students' interaction and intrinsic motivation, respectively. Thus, creating a learner-friendly teaching environment as well as creating lessons that are of interest to learners would positively transform the SDLL experience of learners.

In the Sri Lankan ESL context, too, a few studies have been done on self-directed language learning Most of these studies discuss learner autonomy in the English as a Second Language (ESL) context. One such study on learner autonomy was done by Alfred (2015), where the author states that the technology aims to foster autonomy in learners.

In addition, Premawardhena (2009), commenting on web-based classrooms and learner autonomy, claims that "a shift from traditional teacher-centred, textbook-based learning to student-centred was observed,

which made the students realise the value of the independent study to enhance language knowledge." Therefore, it can be mentioned that web-based online teaching is helpful to improve learner autonomy in the context of language learning.

Further, Ariyasinghe (2019), exploring the use of self-directed language learning in the context of English for Medical Purposes (EMP), explores the possibility of incorporating self-directed learning to improve the listening skills of the medical students, where they will receive an opportunity to practice learning at their own pace. From the findings of the study, it is evident that the lack of practice and exposure are two of the main reasons why learners face difficulties when practising listening activities. Yet, Ariyasinghe (2019) claims that when a tailor-made online platform was implemented, it was quite efficient for the students, and hence, it can be mentioned that implementing SDL in the language classroom supports them in improving their language competencies at their own pace.

In addition, in the study done by Sudusinghe and Kumara (2020), which was one of the most recent studies that had been done especially addressed the changing needs of education during the Covid-19 pandemic, the authors explore the perceptions of students with respect to learning English via distance education in Sri Lanka. When conducting this study, the authors have realized an existing research gap and they claim that: "There are some studies conducted all over the world regarding the student perceptions of learning English via distance education. However, only a few studies have been carried out in the Sri-Lankan setting" (Sudusinghe and Kumara, 2020. p.274). Moreover, the findings of the study suggest that "the methods of teaching should be blended with various teaching methods (from sharing learning material to a virtual face-to-face interaction) and to address every student in the classroom to make distance learning more enjoyable". (Sudusinghe and Kumara, 2020. p.279-280). In addition, with respect to learner autonomy, the authors state that still, students still face various issues with learner autonomy and their level of motivation. Hence, the authors believe that "several interventions should be taken to empower the students" to continue online education. Thus, it can be mentioned that there is a requirement in the Sri Lankan ELT context to conduct studies on learner autonomy and self-directed language learning which will indeed be beneficial for the students to enhance their language competencies as learners responsible for their own learning.

3. Methodology

In order to conduct this explanatory study, a mixed methodology was implemented. Various research instruments such as pre-tests, post-tests and questionnaires, were used to collect data in the present study.

3.1. Research Model/Design

The present study was conducted in a state university in Sri Lanka with participants who are following an EAP course during their undergraduate degree program. In this pre-experimental research design which has only a single group, ensuring content validity, first, a pilot study was done with participants following an English for Academic Purposes program in order to identify the needs of the learners with respect to Academic English. It was also made sure that the pilot study participants did not participate in the main study.

3.1.1. Findings of the pilot study

In the pilot study which was conducted online, a grammar lesson related to EAP was selected for SDLL. In this, students were given the topics they should study and asked to explore the lesson independently after their EAP classroom hours. Thereafter, within a period of one week, they were requested to do a presentation on their own findings. Through this pilot test, the areas of EAP in which students needed improvement were identified and those were later considered to the SDLL platform created for the main study. Further, feedback was collected from the students on the ways in which the approach to SDLL can be improved.

3.1.2. Overview of the Research

Three main research instruments were used to collect data in this study. First, a pre-test was conducted amongst the students to gain an understanding of the EAP topic, which was addressed through Self-Directed Language Learning. Then, a tailor-made self-directed learning platform was introduced to the students to practice the lesson at their own pace, from any convenient location. This tailor –made platform was developed, to cater the identified requirements of EAP learners, based on the pilot test findings.

The platform was available as a Google site (Figure 1 and Figure 2) that the participants could access at their own convenience through any device, such as their mobile phones or tablets. Hence, the platform was user-friendly, and the users did not have to switch on their computers every time to access the platform. The platform was introduced to the participants with three main objectives: 1) For them to use as a reference to learn Academic Style in Writing, 2) For the participants to practice activities in Academic Style and 3) To introduce them to extra reading material to improve their knowledge of Academic Style. Hence, activities on academic style as well as further learning material were also provided to the students to refer more to the topic. Further reading material included links to other websites regarding Academic Style and names of books focusing on Academic English. The teacher acted the role of the facilitator in this context and students were supposed to be independent learners exploring the depths of knowledge.

Figure 1: Web interface

Figure 2: Web interface

After two weeks of the implementation of the SDLL platform, students were given a post-test to check whether their knowledge had improved through the self-directed language learning process. In addition, a questionnaire was distributed amongst them to determine their perceptions of self-directed language learning.

3.2. Data Collecting Tools

In the present study, in order to determine how the learners had gathered knowledge and improved their language competencies through self-directed language learning, a pre-test and a post-test were conducted. Data collected through the tests, which were the scores of the students were quantitative. It is believed that Pre-Tests and post-tests Tests effective tools to determine the transitions the learners had made during the process of self-directed language learning. (Wichadee, 2011; Kranzow & Hyland, 2006; Lai, Shum & Tian 2014) Thus, Pre-Test was conducted prior to introducing the platform and the post-test was conducted two weeks after the process of self-directed language learning. There were two pre-tests and two post-tests, addressing two components: i) Grammar and ii) Vocabulary. Multiple Choice Questions and Gap Filling Questions were included in the tests and they were made based on the content presented in the SDLL platform, including the facts as well as the activities. It was ensured that parallel-form reliability was assured in both the aforementioned components of pre-test and post-test.

Before conducting the pre-test, participants were provided a brief introduction to the lesson, yet the in-depth details were not discussed. After collecting data from the pre-test, the SDL platform was introduced to the participants. Then, two weeks of time was provided for the participants to study the content available in the SDL platform whilst practising the activities available on the platform at their own pace. In addition,

the participants were requested to study the lesson on their own using the available further reading material. Thereafter, the post-test was given.

After the post-test, in order to gather the perceptions of learners towards SDLL, an online questionnaire was sent to the participants. The main objective of the questionnaire was to analyze how the participants perceived self-directed language learning and determine whether they believed that they had benefitted from self-directed language learning. In addition, suggestions were sought from participants to discover the ways in which they think SDLL can be implemented in the language classroom.Through the questionnaire, both quantitative and qualitative data were gathered.

3.3. Sampling or Study Group

The study was conducted at the Gampaha Wickramarachchi University of Indigenous Medicine with undergraduates who are pursuing a "Bachelor of Ayurveda Medicine and Surgery" degree. The participants of the study were undergraduates who were following the course "Advanced English for Scientific Communication".

3.4. Data Analysis

After collecting data from the participants, the data analysis of the study was done under two main stages. The first stage of data analysis included analyzing the data of the pre-test and the post-test from the participants whereas the second stage included analyzing the data gathered through the questionnaire.

The first stage of data analysis included quantitative data collected from the pre-tests and the post-tests done by the participants. Their responses were marked and quantitative data were collected based on the marks they observed for each test. For data analysis of the pre-test and the post-test, SPSS: Statistical Package for the Social Sciences was used. Thereafter, the results of the pre-tests and the post-tests were compared to obtain a comparative viewpoint of participants' improvement of self-directed language learning, using Paired-T Test analysis and Correlative Analysis.

During the second stage of data analysis, the data gathered from the questionnaire were thematically analyzed. A content analysis of the questionnaires was done to analyze both qualitative and quantitative data. Analyzing the data gathered through a questionnaire was helpful to determine participants' standpoint of self-directed language learning.

3.5. Findings and Discussions

In this section, findings obtained through pre-tests, post-tests and the questionnaire distributed will be discussed.

3.5.1.1. Competencies needing improvement

First, the participants were asked what language competencies they needed to improve when they were following the EAP course. They were asked to select the competencies from the options: Speaking, Reading, Writing, Listening, Grammar and Vocabulary. The following chart represents the answers given by the participants.

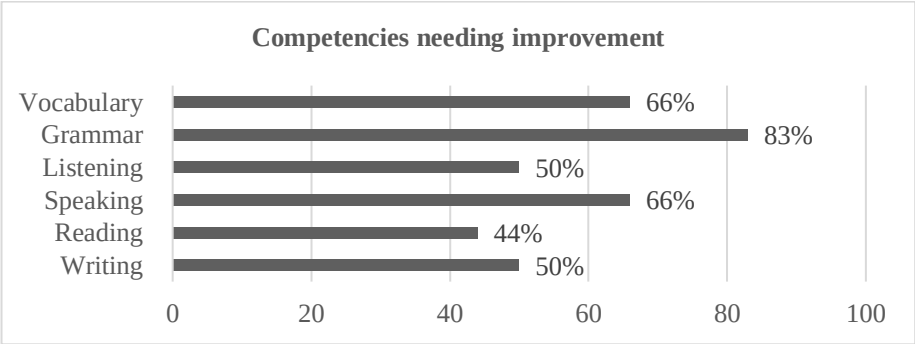

Figure 3: Skills which need improvement

As the above graph shows (Figure 3), when the students were asked as to what competencies they need to improve, they mentioned that they believe their grammar skills need considerable improvement. In addition, participants responded that their vocabulary and speaking skills need improvement as well as shown in Figure 3. Though all the competencies could not be considered, "grammar" and "vocabulary" were chosen to be addressed as the topics of the main study, based on participants' preference in the pilot study.

3.5.1.2. Problems faced outside the classroom when learning on their own

Next, participants were asked about the problems they faced while they were pursuing Self-Directed Language Learning outside the language classroom and the suggestions for improvement.

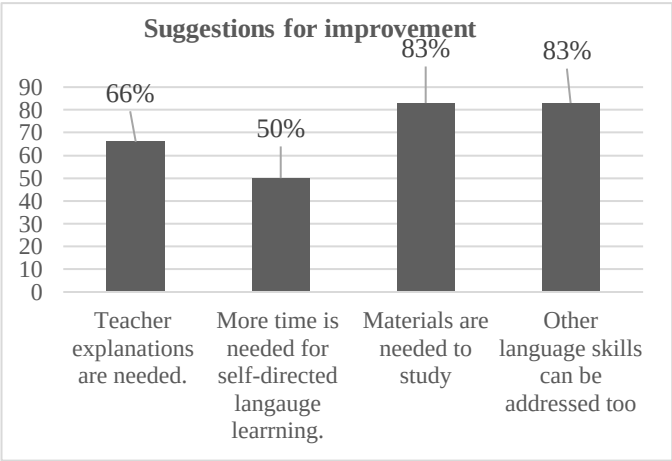

Figure 4: Difficulties Faced when learning on their own

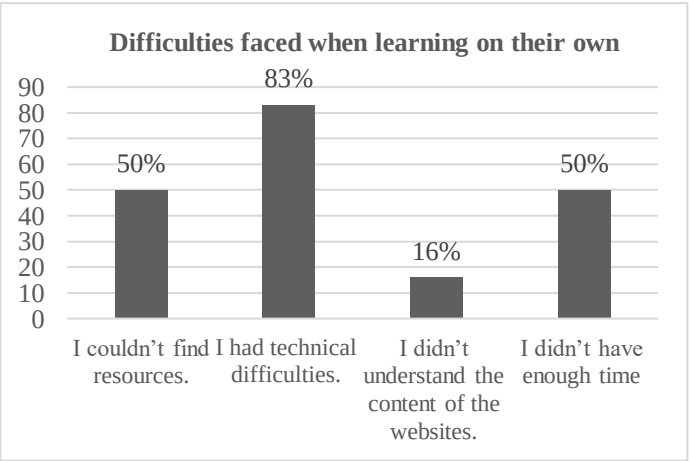

Figure 5: Suggestions for Improvement

As shown from the above graphs, many of the students faced challenges in finding the resources as well as in comprehending the material, as shown in Figure 3. Thus, they have suggested resources to be provided in future SDLL implementations (Figure 4). Taking the suggestions from the participants of the pilot study on providing resources, a tailor-made self-directed language learning platform was made to be given to the participants of the main study as a resource they can use when they are engaged in SDLL. The tailor-made SDLL platform included activities for students to practice, alongside some further reading material and descriptions of the lessons they can follow.

The second fact derived from the pilot study was the time constraints, as shown in Figure 3 and Figure 4. During the pilot study, students mentioned that they did not have adequate time to engage in the SDLL process since only one week was provided at the time of the study. Hence, during the main study, two weeks were allocated for the students to engage in self-directed language learning.

Another fact that was addressed in the main study was the issue mentioned in the pilot study with respect to teacher input. In the pilot study, no information was provided to the students on the lessons they were

supposed to study before they engaged in self-directed learning. As a result, students faced issues in comprehending the lessons, as mentioned in Figure 3. In addition, students suggested that if they had been provided teacher input before the SDLL process, it would have been better (Figure 4). Therefore, considering that aspect, in the main study, the lesson was briefly explained to the students before they engaged in the SDLL process.

3.7.2. Findings of the main study

3.7.2.1. Findings from the Paired T-Tests

A paired t-test was conducted in both the vocabulary and grammar components in order to determine whether there was a difference in the performance of the participants in the pre-tests and the post-tests. Whilst executing the paired t-test, two hypotheses had been taken into consideration.

H0: There is no significant difference between the pre-test and the post-test.

H1: There is a significant difference between the pre-test and the post-test.

3.5.2.1.1 Paired t-test analysis of the vocabulary tests

The following figure (figure 5) shows the results of the paired t-test analysis done for the pre-test and the post-test of the vocabulary component.

Table 1: Paired t-test (vocabulary)

Table 1: Paired t-test (vocabulary)

Paired Sample Statistics

		Mean	Std. Deviation
Pair 1	Vocabulary_PreTest	6.20	1.750
	Vocabulary_PostTest	7.87	1.167

Paired Sample Test
Paired Differences

		Mean	Std. Deviation	T Value	DF	Sig (2-Tailed)
Pair 1	Vocabulary_PreTest Vocabulary_PostTest	-1.667	1.845	-4.949	29	.000

Based on the findings of the t-test analysis in the vocabulary component (Table 1), it can be seen that the mean value of the vocabulary post-test (Mean=7.87) is higher than the mean value of the vocabulary pre-test (Mean=6.2). Therefore, from the mean values, it can be stated that there is a clear improvement in the performance of the participants in the pre-test than the post-test as a result of their engagement in the self-directed language learning process before conducting the post-test. Thus, H1 can be accepted since there is clearly a significant difference between the performance of participants in the pre-test and the post-test of the vocabulary component.

In addition, the standard deviation of the post-test (std. deviation = 1.167) is lower than the standard deviation of the pre-test (std. deviation = 1.750), as shown in the t-test analysis of the vocabulary component (Table 1). It shows that the difference in the performance the participants had had before engaging in SDLL had been lowered after engaging in SDLL. Therefore, it can be considered that introducing the tailor-made SDLL platform has been supportive in improving the knowledge of the low-proficient students on the introduced topic by minimising the difference it earlier had in the entire set of participants.

3.5.2.1.2 Paired t-test analysis of the grammar tests

The following figure (figure 5) is the paired t-test analysis done for the pre-test and the post-test of the grammar component.

Table 2: Paired t-test (grammar)

Paired Sample Statistics			
		Mean	Std. Deviation
Pair 1	Grammar_PreTest	1.3667	.85029
	Grammar_PostTest	3.2333	1.54659

Paired Sample Test Paired Differences						
		Mean	Std. Deviation	T Value	DF	Sig (2-Tailed)
Pair 1	Grammar_PreTest Grammar_PostTest	-1.86667	1.81437	-5.635	29	.000

With respect to the t-test analysis of the grammar component as shown in Table 2, the mean value of the post-test (mean = 3.2333) is considerably higher than the mean value of the pre-tests (mean=1.3667). Hence, there is clearly a significant difference between the performance of participants in the pre-test and the post-test of the grammar component, proving the H1 hypothesis. It can be assumed that there is an improvement in the student's performance in the post-test than the pre-test. Hence, it can be stated that the improvement had been resulted from the participants' engagement in SDLL.

However, unlike in the paired t-test analysis of the vocabulary component, in the grammar component, the value of the standard deviation of the post-test has not been lower than the standard deviation value of the pre-test. In contrast, the value of the standard deviation of the post-test (standard deviation= 1.54659) remains higher than the standard deviation value of the pre-test (standard deviation = .85029). Thus, it can be stated that even after engaging in the process of SDLL, the difference in the performance of the students with respect to the grammar component remained higher.

When analysing the findings from the paired t-test, it was evident that the performance of the student had significantly changed from the pre-test to the post-test in both the grammar and the vocabulary components. Hence, it can be mentioned that the self-directed language process positively affected the performance of the students in developing their language skills in the EAP classroom, proving the H1 hypothesis: there is a significant difference between the performance of the pre-test and the post-test.

3.7.2.2. Findings from the correlation analysis

Next, in the analysis, the improvement of the participants in the pre-tests and the post-tests were checked alongside three main factors, including: i) Number of Practice Tests done ii) Number of hours allocated for SDLL and 3) Use of Further Reading Material. These three factors were chosen based on students' engagement in the SDLL tool to check whether they have done the practice tests, and for how long they studied using SDLL and whether they referred the further reading material given in the platform. The responses for those three factors were recorded in the questionnaire.

3.5.2.2.1. Correlations with the vocabulary test improvement

The correlation analysis done with the vocabulary improvement and the number of tests done by the participants is depicted in the table below (Table 3). Vocabulary Improvement was determined by the progress students had made when comparing their marks on the pre-test and the post-test.

Table 3: Correlation Table 1 (Vocabulary)

Correlations			
Vocabulary_Improvement	Pearson Correlation	1	.580
	Sig (2-tailed)		.001
Number_of_Tests_Done	Pearson Correlation	.580	1
	Sig (2-tailed)	.001	

The correlation analysis as shown in Table 3 depicts that there is a strong positive correlation in the two variables: improvement of students' performance in the vocabulary test and the number of practice tests. Moreover, it is clear that the correlation is a statistically significant correlation.

The following chart (Table 4) represents the correlation analysis done with vocabulary improvement and the number of hours participants allocated for self-directed language learning. For number of hours studied, participants were given four choices to choose from, including 1-3 hours, 3-6 hours, 6-9 hours and more than 10 hours. None of the participants had studied SDLL for more than 6 hours. A Spearman's Ranking Order (RO) analysis was conducted on the aforementioned two variables and the graph is depicted below. However, according to the statistical analysis (Table 4), there is no or negligible relationship between the two variables, which is not significant as well. Hence, it can be stated that the number of hours allocated by the students for SDLL does not show a correlation with the improvement of the performance of students in the vocabulary test.

Table 4: Correlation Table 2 (Vocabulary)

	Correlations			
Spearman's RO	Vocabulary_Improvement	Correlation Coefficient	1.000	.154
		Sig (2-tailed)		.416
	Number_of_hours_Allocated	Pearson Correlation	.154	1
		Sig (2-tailed)	.416	

Next, the improvement in the vocabulary tests and the use of further reference material usage by the students were analyzed in the correlation analysis. The fact that the students had used a further reference or not had been taken into consideration in the correlation analysis, and a Spearman's analysis was conducted (Table 5).

Table 5: Correlation Table 3 (Vocabulary)

	Correlations			
Spearman's RO	Vocabulary_Improvement	Correlation Coefficient	1.000	.373
		Sig (2-tailed)		0.42
	Use_of_further_reading_material	Pearson Correlation	.373	1.000
		Sig (2-tailed)	0.42	

As shown in Table 5, there is a moderately positive correlation amongst the improvement of the vocabulary test and the use of further reading material. In addition, according to Spearman's ranking order analysis, the correlation is statistically significant too.

3.5.2.2.2 Correlations with the grammar test improvement

In the grammar component too, the correlations analysis was done with the grammar test improvement and the number of tests done by the participants. The analysis is depicted in the chart below (Table 6).

Table 6: Correlation Table 1 (Grammar)

Correlations			
Grammar_Improvement	Pearson Correlation	1	.895
	Sig (2-tailed)		.000
Number_Of_Tests_Done	Pearson Correlation	.895	
	Sig (2-tailed)	.000	

Based on the values shown in Table 6, it can be stated that there is a strong correlation between the two variables. In addition, the correlation between the two variables is statistically significant too.

Next, the correlation analysis done with the variables: grammar improvement and the number of hours allocated for SDLL is shown in the following chart (Table 7). Similar to the analysis in Table 4, for the number of hours studied, participants were given four choices to choose from. The Spearman's RO analysis conducted on the aforementioned two variables is depicted in the graph below (Table 7).

Table 7: Correlation Table 2 (Grammar)

	Correlations			
Spearman's RO	Grammar_Improvement	Correlation Coefficient	1.000	-163
		Sig (2-tailed)		.390
	Number_of_hours_Allocated	Pearson Correlation	-.163	
		Sig (2-tailed)	.390	

In the above analysis too, there is a negative or no correlation and it is statistically insignificant as well. Therefore, it can be stated that the number of hours allocated by the participants for SDLL does not show a correlation with the improvement of the performance of students in the grammar test.

The final correlation analysis done under the grammar component was concerned with two variables: grammar improvement and the usage of further reading material. Similar to Table 5, the fact of whether the students had used a further reference or not is analyzed in Spearman's Ranking Order Analysis mentioned below (Table 8).

Table 8: Correlation Table 3 (Grammar)

Correlations				
Spearman's RO	Grammar_Improvement	Correlation Coefficient	1.000	.189
		Sig (2-tailed)		.318
	Use_of_further_reading_material	Pearson Correlation	.189	1.000
		Sig (2-tailed)	.318	

From the values shown in Table 8, it is evident that the relationship is weak and it is statistically insignificant as well. Thus, it can be mentioned that the use of further reading material does not show a correlation with the improvement of the performance of students in the grammar test.

Thus, after analyzing the aforementioned correlations, it can be concluded that the number of tests practised by the students has a significant relationship with the improvement of the students even though the other two facts, such as: i) usage of further reading material and ii) number of hours allocated for SDLL do not show such correlation.

3.7.3. Findings of the follow-up questionnaire

3.7.3.1. Participants' Engagement in SDLL

After conducting the post-test, the participants were provided with a questionnaire to rate their self-directed language learning experience. The following chart (Table 9) represents the responses to learner engagement in the SDLL platform.

Table 9: Learner Engagement

Learner Engagement	Participant's Response
Hours allocated for SDLL per week	1-3 hours: 66% 3 to 4 hours: 34%
Number of Practice Tests Done	3+ Tests: 33% 1-2 Tests: 40% No Test Done: 27%
Use of Further Reference Material	Used the further reference material: 57% Had not used the material: 43%
Types of Further Reference Material	Websites: 57% Books: 10% Referred material on their own: 10%

As the results in Table 9 show, a majority of the participants had allocated 1-3 hours per week whereas a minority of the participants (34%) had spent nearly 3-6 hours for SDLL. A major reason for this could be the fact that they do have other mainstream subjects for which their attention is required rather than engaging in SDLL to improve their language competencies. However, the impact of the number of hours allocated for SDLL on the overall improvement of their grammar and vocabulary skills is shown in Table 2 and Table 5.

When analyzing the number of tests practised by the participants, it can be seen that only three-quarters of the participants had practiced the practice tests given in the SDLL. As Table 9 shows, half of the participants had done more than two practice tests that were available in the tailor-made self-directed language learning platform. However, practicing the practice tests might have greatly aided the students in improving their

knowledge of the given topic and in facing the post-test well. Tables 4 and 8 represent the impact the practice tests have had on the overall improvement of the vocabulary and grammar language competencies of the participants.

The next factor that was analyzed in the questionnaire was the use of further reference materials by the participants. As Table 9 shows, only 57% of the participants had referred the further reference material, and 10% out of them claimed that they had found their own material as well. Thus, this graph (Figure 12) shows that the majority of the participants explored the subject on their own rather than depending only on the material provided by the teacher. Therefore, it clearly indicates that the participants have acquired self-directed learning skills, to find facts on their own and improve their knowledge by themselves.

3.7.3.2. Participants' Perceptions towards SDLL

After the participants engaged in the SDLL process, they were asked to rate their experience on a Likert scale. They were given various statements to rate, as shown in Table 10, based on how they perceived the whole SDLL experience.

Table 10: Perceptions towards SDLL

Perceptions towards SDLL	Participant's Response
Learning how to continue self-studies in English.	84%
Learning how to self-study will be beneficial.	77%
Subject Knowledge improvement	69%
Learning a new skill through SDL	66%
Ability to memorize.	66%
Ability to explore the lesson on their own.	56%
Confidence increases	34%
Preference for Self-Directed Language Learning	77%

With respect to the preference of SDLL, it was found that a majority of the participants prefer SDLL and that they claim when teacher explanations are followed by SDLL, it is more effective since they can clarify their doubts in such instances. Further, it can be stated that most of the participants believe SDLL is an effective strategy that can be implemented in the classroom since it will be helpful for them even in the latter part of their graduate career.

3.7.3.3. Comments and Suggestions Given by Participants on SDLL

Through the follow-up questionnaire, participants were asked us provide comments and suggestions on their SDLL experience. Whilst most of the comments target the positive impact of self-directed language learning, helpful suggestions were also received, focusing on various aspects, such as adding more tasks to the tailor-made self-directed language learning platform and providing material prior to the lesson. In addition, presenting a few explanatory videos on the subject matter was another suggestion presented by the participants. Furthermore, participants had requested for books to be shared as further reference material in addition to creating a forum to solve their questions that arise on the subject. Nevertheless, the participants suggested expanding the SDLL implementation over other competencies too.

4. Conclusion and Suggestions

In the higher education context, independent learning is expected from the students, and hence, in order to introduce the students to autonomous learning, implementing a tailor-made self-directed language learning platform has been beneficial in various aspects. Especially since the SDLL platform was tailor-made and since the students are continuing their studies online now due to the ongoing global pandemic, students can use SDLL to explore the depths of knowledge at their own convenience without restraints such as location and time.

Based on the findings of the present research, it can be stated that conducting a pilot study prior to the main study was useful in knowing the students' requirements and addressing their problems. Such identified problems could be resolved in the main study, making the SDLL process effective for the students.

In relation to determining whether the participants had improved their knowledge through self-directed language learning, it can be mentioned that there is a significant difference in the performance of the participants between the pre-test and the post-test of both vocabulary and grammar components. Therefore, it is apparent that self-directed language learning had a positive impact on participants in improving their knowledge. In order to achieve that, the number of practice tests done by the participants when engaging in the tailor-made self-directed language learning platform was helpful.

With respect to the participant's perceptions of self-directed language learning in the language classroom, it can be mentioned that the majority of the participants preferred self-directed language learning and how they could explore the subject through self-directed language learning. Therefore, after analyzing the aforementioned factors, it can be concluded that in the context of ELT in Sri Lanka, self-directed language learning can be introduced to the students with minimal yet adequate teacher support in order to improve learner autonomy of the students. Especially, when tailor-made online tools are introduced to the classroom, addressing learner requirements, it would be helpful for the students to improve their knowledge and develop the required language competencies.

4.7. Further Implications

Further research can be done in various other types of ESL classrooms, such as English for Specific Purposes (ESP), English for Medical Purposes (EMP) and English for General Purposes (EGP). In addition, this study could be expanded to not only in ESL but also in other language classrooms. Moreover, tailor-made self-directed learning (SDL) platforms can be introduced in other disciplines except applied linguistics and research can be conducted on the efficiency of using such SDL platforms for distance learning. Furthermore, the current study only addresses the implementation of SDLL for adult learners in a university. Yet, further research can be conducted focusing the young learners in an ESL classroom since the findings of the study in such an environment might differ from that of the present study.

In addition, it can be recommended that conducting a Needs Analysis before the implementation of SDLL would be helpful in identifying the requirements of the students. Then, based on the responses of a needs analysis, tailor-made SDLL platforms and SDLL strategies can be implemented in the classroom, addressing the exact language requirements of the students. Additionally, a forum can be initiated to share the questions of the students, in a shared online discussion forum. Moreover, further reading material can be added to SDLL, giving the opportunity for the students to explore the depths of the subject. Additionally, to improve the interaction of such platforms, explanatory videos and tasks can be added, which increases learner engagement.

Therefore, it can be stated that in order to make the SDLL implementation an effective process, tailor-made SDLL platforms can be introduced in the language classroom, addressing students' requirements, which aids to improve language proficiency learning through autonomy and independence.

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