Flexibility as a Double-Edged Sword? Language Learner Autonomy in a Blended Self-Directed Learning Program Beyond the Classroom

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Abstract

This study proposed and implemented a blended self-directed learning program for English-as-a-Foreign-Language (EFL) college students beyond the classroom. Adopting a case study-mixed methods design, the study aimed to investigate (1) learners' engagement in the program, (2) the effects of the program, and (3) learners' perceptions of the affective, resource, and capacity supports offered by the program. Thirty-six students voluntarily participated in a 12-week self-directed listening program, which offered both in-person and online learning resources along with mechanisms designed to support students' self-regulated learning outside of the classroom. Data collection included (1) TOEFL listening pre-and post-test scores, (2) Metacognitive Awareness Listening Questionnaire (MALQ) pre-and post-test scores, (3) an English learning motivation questionnaire, (4) learning diaries, (5) activity participation records, (6) an end-of-program questionnaire, and (7) end-of-program interviews. The findings showed that participants perceived learning flexibility within the program as both a pivotal strength and a notable weakness. The participants, who generally demonstrated reactive autonomy, actually depended on, and expected various forms of external regulation to sustain their learning motivation. Also, the highly engaged learners had more growth in metacognitive awareness of listening than did less engaged ones. By engaging in self-directed learning, learners actively exercised their agency to (re)construct their personal language learning ecologies, a process that was found to require teacher guidance.

Keywords: Self-directed learning, learner autonomy, motivation, metacognitive awareness.

Introduction

Self-directed learning is defined as the "process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating goals, identifying human and material resources, choosing and implementing appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p. 18). Technology has played an important role in enabling and supporting self-directed language learning by providing virtual learning spaces and offering easy access to authentic materials and a variety of tools. With the aid of technology, self-directed learning has been integrated into formal language courses and found to foster learner autonomy (Kim, 2014; Lee, 2016; Snodin, 2013). In recent years, students' self-directed language learning processes using technology have been examined in out-of-class language learning contexts; beyond the formal curriculum, high attrition rates were often reported, and learner training or teacher support was called for (e.g., García Botero et al., 2019). Given the high attrition rates reported in the literature, few studies, however, have investigated how learners highly engaged in self-directed learning outside the classroom differ from their less engaged counterparts in terms of their language learning motivation and language learning gains. Also, few studies have explored learner perceptions of various forms of teacher support within this context. The present study aims to address these research gaps.

Self-directed language learning beyond the classroom is especially meaningful to English-as-a-Foreign-Language (EFL) learners because their in-class language exposure and practice tend to be limited (García Botero et al., 2019) and technology provides more diverse opportunities for language learning anytime and anywhere. In the present study, a blended self-directed listening program was developed for EFL learners to use various e-learning tools and media resources in an out-of-class context. The blended program integrated both face-to-face and online learning support. Through a case study design, the present study aimed to explore learners' autonomous learning behaviors, the program effects, and learners' perceptions of various types of self-directed learning support.

Theoretical Foundations and Literature Review

The present study is situated under the theoretical framework of learner autonomy. Holec (1981, p. 3) defined autonomy as a learner's "ability to take charge of one's own learning." While Holec's definition implies that autonomy is an attribute of the learner, Dickinson (1987, p. 11) treated autonomy as learning situations "in which the learner is totally responsible for all of the decisions concerned with his learning and the implementation of those decisions." In line with Holec's (1981) definition, Little (1991, p. 4) adds a psychological layer to learner autonomy. He argues that "autonomy in language learning depends on the development and exercise of a capacity for detachment, critical reflection, decision making and independent action." Little's definition further elaborates on how certain underlying psychological processes are involved when learners are taking control over their learning. Building on Holec's and Little's perspectives on autonomy, Benson (2001) identifies a third dimension in autonomous learning—the content of learning. He emphasizes the importance of allowing learners to choose what they learn. Without learner control over content, learner autonomy "may be reduced to a choice of the most appropriate method of completing a task that lacks authenticity in terms of the learner's own perceived learning needs" (Benson, 2001, p. 100).

Littlewood (1999, p. 75) categorized autonomy into two levels. Proactive autonomy involves learner decisions on learning objectives, methods, and evaluations. This type of autonomy establishes learners' individuality and allows them to determine directions in a world that they participated in creating. Reactive autonomy, on the other hand, refers to "the kind which does not create its own directions but, once a direction has been initiated, enables learners to organize their resources autonomously in

order to reach their goal." Littlewood notes that although proactive autonomy may be regarded as the ultimate level of autonomy, reactive autonomy may serve as its prerequisite.

On one hand, autonomy entails learners' control of "cognitive and affective processes to which no one else can have direct access" (Little, 2007, p. 18); on the other hand, it also implies collaboration and interdependence because individual decisions are shaped by social contexts (Benson, 2001; Kohonen, 1992). The sociocultural dimension was later added to learner autonomy (Oxford, 2003; Ushioda, 2003). The self-directed listening program developed for the present study was greatly informed by the double-dimensional nature of learner autonomy. The program allowed learners to exercise control over their individual cognitive learning processes on one hand; on the other, the program also incorporated social mediation during their learning process.

According to Benson (2001, p. 8), autonomy can be "seen as a natural product of the practice of self-directed learning, or learning in which the objectives, progress, and evaluation of learning are determined by the learners themselves." In other words, autonomy can be viewed as a learner capacity (Benson, 2001), while self-directed learning is a learning approach (Knowles, 1975). Few studies have examined self-directed language learning which blended in-person and online learning beyond formal curriculum. An exception was Yang's (2016) study, which aimed to foster learner autonomy through a self-directed English-for-specific-purposes (ESP) program in seven universities in Taiwan. In this program, all activities involved no academic credits nor formal grading. Students could voluntarily participate in a range of activities, such as downloading learning materials for individual study, participating in onsite group discussions and role-plays, joining online group discussions, or taking online tests. The results showed that EFL college students in Taiwan were capable of taking control over their own learning in the self-directed learning program. They also demonstrated better learning outcomes on a TOEIC reading and listening post-test.

Similar to Yang's (2016) program, the self-directed learning program developed for the present study involved both onsite and online learning and was zero-credit and zero-grading. Informed by Lai et al.'s (2017) results, which indicate that various forms of teacher support are critical to students' self-directed learning, the present study incorporated face-to-face advisory sessions into the program. Also, drawing from the implication of Du's study (2012), study plans and self-reflective exercises were implemented in the self-directed learning program in the present study as an instructional approach to help develop students' self-regulation capabilities and as a research instrument to document their self-directed learning processes.

Research Questions

The present study aimed to answer the following questions:

1. To what extent did EFL learners engage in the self-directed listening program?
2. How did highly engaged EFL learners differ from less engaged ones?
3. What were EFL learners' perceptions of various aspects of self-directed listening support?

Methodology

Participants

Thirty-seven students signed up for the program, and one withdrew from it. Therefore, the participants were 36 EFL undergraduate students (23 females; 13 males) with a mean age of 19.5 years enrolled in a public university in Taiwan. The students were three freshmen, 11 sophomores,

nine juniors, and 13 seniors. Their academic disciplines varied, including engineering and technology (n = 15), social sciences (n = 9), mathematics and applied sciences (n = 6), and management and finance (n = 6). They reported having learned English for an average of 12.94 years (*SD* = 2.08), and none had lived in an English-speaking country for more than three years. Their listening proficiency was at the intermediate level (*M* = 19.39, *SD* = 5.96), according to the TOEFL listening pre-test scores. All participants signed up for the present study voluntarily. The study followed an approved Institutional Review Board (IRB) protocol to recruit participants and collect data.
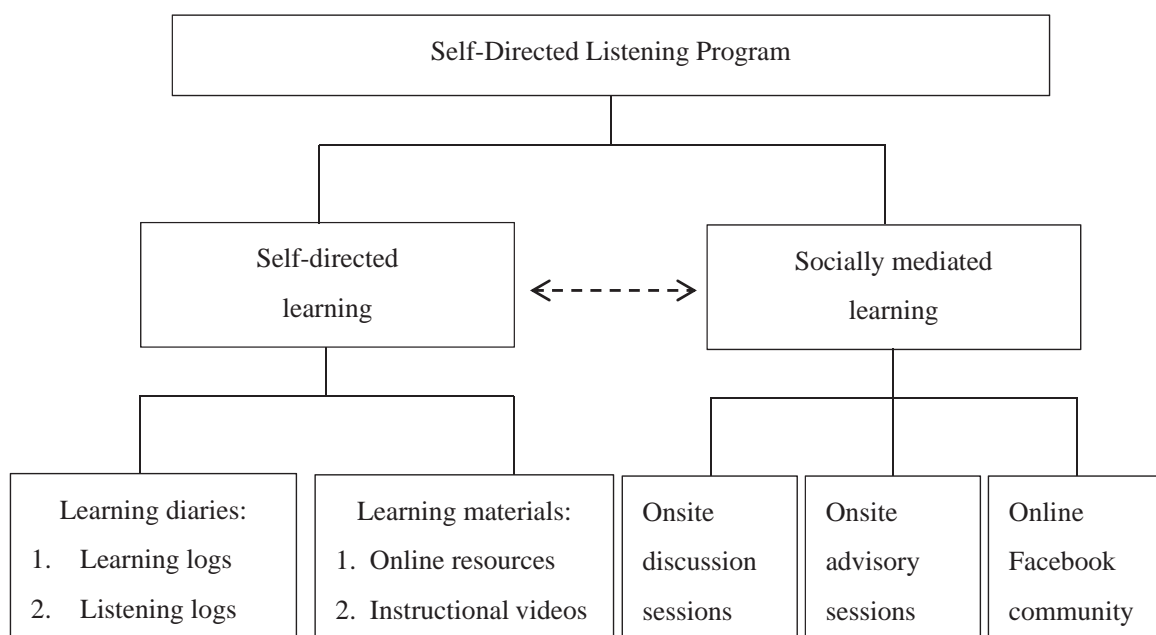
Self-Directed Listening Program

The self-directed listening program was designed to give students support in their metacognitive (learning process), cognitive (language skills), and affective (motivation) dimensions of learning. The program lasted 12 weeks during an academic semester. Figure 1 illustrates the key components of the program, including two forms of learning: self-directed learning and socially mediated learning.

Three instructors were involved in the program. The researcher was the main instructor. Instructor A was responsible for selecting recommended listening materials, designing learning materials, and leading weekly onsite discussion sessions. Instructor B was responsible for developing listening in-structional videos.

A university course management system (CMS) was used to share relevant materials and information about the program. Facebook was used as an online social platform. Weekly onsite discussion and advisory sessions were held to provide face-to-face interaction opportunities. The typical duration of face-to-face classroom instruction in a language course in college in Taiwan is two hours per week. In this self-directed listening program, the two hours of mandatory class attendance was transformed into voluntary participation in onsite discussion and advisory sessions and various types of self-directed individual practice outside of the class. Each component is described as follows.

Learning Diaries

Participants were asked to keep two types of learning diaries. The first, bi-weekly learning logs, focused on their overall self-regulated learning. The second, listening logs, focused on their listening process.

Figure 1 *Components of the self-directed listening program.*

Bi-Weekly Learning Logs. The learning log was divided into two sections based on the preaction and postaction phases in Schmitz and Wiese's (2006) self-regulated model. In the first section, the participants were asked to (1) describe their learning goals, (2) list the resources that they planned to use, (3) plan study times, and (4) describe approaches that they planned to use to motivate their own learning for the following two weeks. In the second section, they evaluated the quality and quantity of their learning outcomes over the preceding two weeks. The bi-weekly learning logs were distributed to participants and submitted to the instructor via the university CMS.

Listening Logs. Participants were asked to fill out an online listening log for each completed listening practice (e.g., a TED talk, a video clip on YouTube, or a news report). A Google Form was created for the prompts and links were provided to participants on the CMS and Facebook. As a research instrument, the listening log asked participants to provide a link for each video that they watched and to report strategies used and difficulties encountered during the listening process.

Learning Materials

Two types of learning materials were made available for participants. One was a list of free online resources for listening practice, and the other was instructional videos on listening strategies created by Instructor B.

Online Resources. A list of online resources for listening practice was compiled and links made available to participants. The list also included suggestions on how each resource could be used. Participants could choose to listen to the materials on the list or select other materials that matched their learning objectives. There were two to three recommended listening selections every week. Instructor A, who led the onsite discussion session, selected these materials. The researcher posted the recommended materials on the university CMS and Facebook every Monday morning. Participants were encouraged to listen to them in addition to other self-selected materials. Those who wanted to participate in the weekly onsite discussion session (described below) were expected to finish listening to these materials before they attended the session.

Instructional Videos. A series of videos made by Instructor B was posted on the online platforms. Twelve topics were developed and a total of 16 videos were produced. Some topics were developed based on Yeldham's (2016) list of strategies that can be taught in listening courses; others were developed for the present study to help learners practice English listening autonomously. The video(s) on each topic were posted on the online platforms every Monday morning. Participants were free to decide which videos to watch.

Weekly Onsite Discussion Sessions

Two 50-minute onsite discussion sessions were offered every week. One was led by the researcher and the other was led by Instructor A. The topics of the discussion sessions were based on those in the recommended listening materials of the week. Participants could freely sign up for a session every week. Ten minutes before the discussion session ended, the topic was shifted to participants' reflections on their weekly learning progress and difficulties.

Advisory Sessions

In addition to the weekly onsite discussions, which offered opportunities for face-to-face interaction, the researcher also offered a one-hour advisory session every week. Participants could freely come

to the session to discuss individual learning progress and problems with the researcher face-to-face. The participants were encouraged to discuss their weekly learning and listening logs with the researcher.

Facebook Community

A Facebook community was established and served as a social platform for participants. The researcher posted discussion questions based on the weekly topic and encouraged participants to respond to the questions.

Research Design and Data Collection

As learner autonomy has been widely recognized as a multidimensional construct, shaped by factors such as cultural context (Benson, 2001), the present study employed a case study-mixed methods (CS-MM) design (Guetterman et al., 2018) to obtain an in-depth understanding of EFL learner autonomy and its effects in a specific learning context. Data collection included (1) TOEFL listening pre- and post-test scores, (2) Metacognitive Awareness Listening Questionnaire (MALQ) pre- and post-test scores, (3) an English learning motivation questionnaire, (4) learning diaries as described in the previous section, (5) activity participation records, (6) an end-of-program questionnaire, and (7) end-of-program interviews. Table 1 summarizes the data collection procedure.

TOEFL Listening Test

Two TOEFL listening tests of the same level of difficulty were used as the pre- and post-tests to measure participants' progress in listening competence. The test was administered on a computer. The pre- and post-test each consisted of 34 questions.

Metacognitive Awareness Listening Questionnaire (MALQ)

The MALQ developed by Vandergrift and colleagues (2006) was used to measure participants' metacognitive strategy uses. The questionnaire consisted of 21 items categorized into five factors: problem-solving, planning and evaluation, mental translation, person knowledge, and directed attention.

Table 1 *Research procedure*

Weeks	Data collection
1	Onsite program orientation
	• TOEFL Pre-test
	• MALQ Questionnaire
	• English learning motivation questionnaire
2–13	Implementation of the self-directed listening program
	• Learning diaries
	• Activity participation records
13–14	TOEFL Post-test
	• MALQ Questionnaire
	• End-of-program questionnaire
	• End-of-program interviews

Motivation Questionnaire

A language learning motivation questionnaire adapted from Li's (2014) study was used to examine how observed autonomous learning behaviors were related to participants' English learning motivation. The questionnaire consisted of 53 items categorized into 12 factors: Ideal L2 self, attitude toward learning English, fear of assimilation, ought-to L2 self, attitude toward L2 community and culture, instrumentality prevention, criterion measures, English anxiety, social expectations, travel orientation, instrumentality promotion, and ethnocentrism.

End-of-Program Questionnaire

The end-of-program questionnaire consisted of 11 questions; three items were scored on a five-point Likert-type scale, while the rest were open-ended questions. The questions asked participants to evaluate the program and their own learning processes and to reflect on difficulties encountered during the program.

End-of-Program Interviews

All participants were invited to participate in a one-on-one semi-structured interview with the researcher regardless of their levels of participation in the program. The purpose of the interview was to understand more about participants' English language learning motivation, their learning processes during the program, difficulties encountered during the process, and suggestions for the program. A total of 23 students were interviewed. A list of interview questions was developed; in addition, both the researcher and a research assistant reviewed all data collected from each participant and developed specific interview questions for each participant. Interviews were audio recorded and transcribed verbatim.

Data Analysis

Quantitative data analyses were conducted with (1) TOEFL listening pre- and post-test scores, (2) MALQ pre- and post-test scores, (3) the English learning motivation questionnaire, (4) the Likert-scale items in the end-of-program questionnaire, and (5) activity participation records. Content analysis was conducted with qualitative data, including learning diaries, responses to open-ended questions in the end-of-program questionnaire, and interviews. The researcher first read all qualitative data line by line to become familiar with the data. The initial coding of the data was guided by the research questions. Three major categories were formed: (1) self-directed learning process, (2) learning motivation, and (3) perceptions of the affective, resource, and capacity support of the program. The subsequent coding involved a recursive process of comparing and contrasting data; themes then emerged under each category.

Results

Overall Participation

The first research question asked to what extent participants engaged in the self-directed listening program. Table 2 summarizes the total number of recommended videos watched, number of self-selected videos watched, Facebook posts and responses, and onsite discussion sessions attended throughout the 12-week program. As can be seen from the table, the level of participation in the first two weeks was high; 75% of the participants engaged in at least one activity. However, this level dropped dramatically starting from Week 3, one week before midterm exams; after that, the participation level fluctuated

between 33% and 58%. In Week 11, two weeks before final exams, the participation level dropped to its lowest point.

As also can be observed in Table 2, more recommended videos than self-selected videos were watched. Figure 2 presents the number of recommended videos provided by the instructor, the average number of recommended videos watched per person, and the average number of self-selected videos watched per person. Most participants viewed the videos recommended by the instructor, although they did not watch all of them. The plotted line of the self-selected videos watched was lower than that of the recommended ones watched in the first 5 weeks, but those lines fluctuated and intersected from the sixth week on.
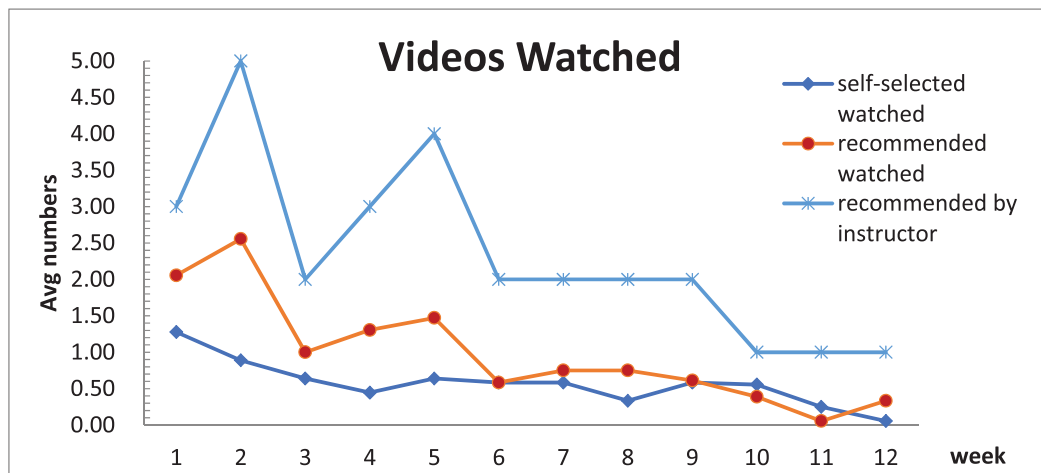

Figure 2 *Average numbers of videos watched.*

Table 2 *Total number of learning activities*

Week	Recommended videos	Self-selected videos	FB posts and responses	Onsite discussion sessions	Number of people who participated (%)[3]
1	74	46	18	12	27 (75)
2	92	32	20	18	27 (75)
3	36	23	16	8	21 (58)
4[1]	47	16	8	4	16 (44)
5	53	23	9	7	15 (42)
6	21	21	8	4	12 (33)
7	27	21	8	4	14 (39)
8	27	12	8	4	13 (36)
9	22	21	7	4	14 (39)
10	14	20	4	2	14 (39)
11	2	9	4	2	5 (14)
12[2]	12	2	4	2	8 (22)

[1]Midterm exam week began; [2]One week before final exams; [3]Number of people who completed at least one learning activity.
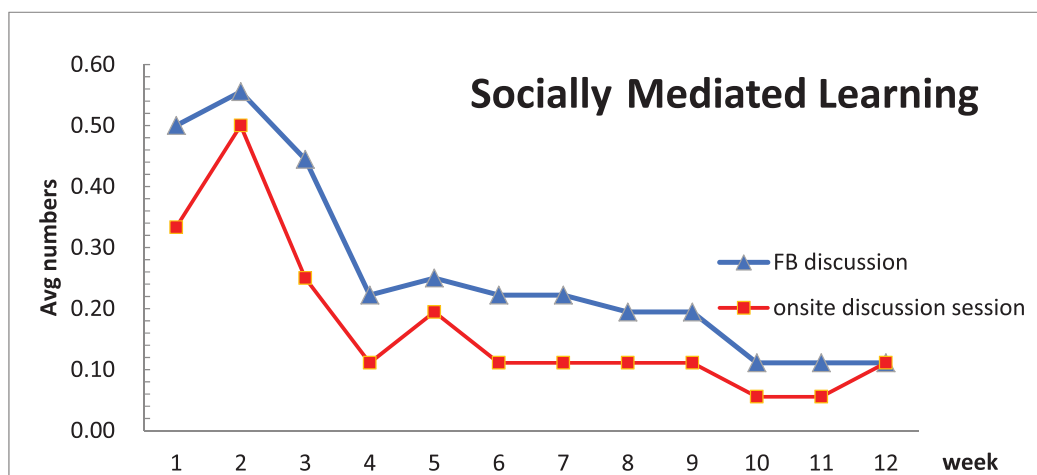
Figure 3 *Average numbers of participation in socially mediated learning.*

Figure 3 presents the average numbers of Facebook messages posted and onsite discussion sessions attended per person over the 12 weeks. Similar to the overall trend of the number of videos watched, the participation levels of these two types of socially mediated activities also decreased during Weeks 3 and 4 and dropped to their lowest in Week 10. As can be seen from comparing the numbers of videos watched in Table 2, participants exhibited less engagement in these two socially mediated learning activities.

Highly Engaged Learners vs Less Engaged Learners

The second research question examined the differences between highly engaged EFL learners and less engaged learners. The 36 participants were first divided into two groups based on their levels of participation: (1) the highly engaged group ($N = 16$; 7–12 weeks of participation) and (2) the less engaged group ($N = 20$; 0–6 weeks of participation). Comparisons of the two groups were performed on their motivations to learn English, gains in listening competence, and growth of metacognitive awareness of listening.

Motivation

One-way analyses of variance (ANOVA) were conducted to compare the two groups' motivation scores, as measured by the English learning motivation questionnaire administered in the beginning of the program. A significant difference was found between the two groups in one motivational construct: instrumentality prevention ($F = 4.54$, partial eta squared = .12, $p = .04$). The less engaged group ($M = 4.13$, $SD = .78$) demonstrated a greater extent of instrumentality prevention regarding English learning than the highly engaged group ($M = 3.80$, $SD = 1.27$). Qualitative data analyses further indicated that highly engaged learners had more concrete or immediate goals of learning English; less engaged ones had preventional instrumentality of learning English or had less concrete goals.

High participation:

> *My dream is to become a pilot, so I have worked hard on improving my English since high school.* (S27, End-of-program questionnaire)
> *I like to understand different cultures. I am curious about different peoples. English allows me to understand these topics more.* (S10, Interview)

Low participation:

> *I know it would be disastrous in the future if my English is poor.* (S14, End-of-program questionnaire)
> *I think I might study abroad. I hope.* (S21, Interview)

Listening Competence and Metacognitive Awareness of Listening

A one-way analysis of covariance (ANCOVA) was performed to compare the two groups' TOEFL listening post-test scores, with the pre-test scores as the covariate to control for the initial differences. No significant difference ($F = 3.22$, partial eta squared $= .16$, $p = .05$) was found between the highly engaged group ($M = 18.06$, $SD = 5.78$) and the less engaged group ($M = 14.75$, $SD = 7.09$), indicating that after adjustment for the initial differences, the two groups demonstrated similar levels of listening competence as measured by the listening post-test.

A series of one-way ANCOVAs was performed to compare the two groups' MALQ post-program scores, using the pre-program scores as the covariate to control for the initial differences. A significant difference was found between the two groups in one factor of metacognitive awareness, problem solving ($F = 5.39$, partial eta squared $= .15$, $p = .027$), indicating that the highly engaged learners demonstrated greater growth related to problem solving of metacognitive awareness than the less engaged learners did.

Learner Perceptions of Various Aspects of Self-Directed Learning Support

The third research question asked about participants' perceptions of the self-directed listening program. Table 3 shows participants' responses in the end-of-program questionnaire. The results showed that they were overall satisfied with the structure of the program and resources provided ($M = 4.03$; $SD = .618$); however, participants gave low ratings on their own learning processes ($M = 2.86$; $SD = .944$) and the effort they put into the program ($M = 2.91$; $SD = .981$).

The Affective Support

The affective support provided to learners in self-directed learning should address their entering motivation to begin engaging in the learning process as well as help them sustain their motivation throughout the learning process (Garrison, 1997). Qualitative data revealed that the program design spoke to the participants' needs. When asked about the initial motivation to participate in the program, almost all participants mentioned that they were looking for regular English practice beyond the formal English curriculum. Some were exempt from taking English courses, while others did not find the English courses fully addressed their needs.

Table 3 *Descriptive statistics of participants' perceptions of the program*

Item	Mean	SD
1. Overall, the way that the program was conducted and the resources provided met my expectations.	4.03	.618
2. Overall, I was satisfied with my learning process over the past 12 weeks.	2.86	.944
3. Overall, I think I tried my best to learn over the past 12 weeks.	2.91	.981

$N = 35$; 1 = totally disagree, 5 = totally agree.

> *I was exempt from taking the Freshman English course, and I did not want to see a decline in my English proficiency.* (S4, Interview)
> *I participated in this program because Freshman English was too easy.* (S3, Interview)
> *I was preparing for TOEFL, thinking that participating* [in this program] *can increase my familiarity with English. There was regular practice every week, so my English would not get rusty.* (S20, Interview)

Participants also embraced the value of autonomous language learning even though most of them had no experience of it before participating in this program.

> *I feel that English is very suitable for this approach. I actually enjoy self-directed learning…When watching the videos* [for this program]*, I felt happy and learned something. Learning should be like this!* (S32, Interview)

Flexibility was the main reason that the participants liked self-directed learning, according to the end-of-program questionnaire and interviews. "*I prefer this approach because I can schedule my own time.* (S4, Interview)" The flexibility of the program not only allowed the participants to manage their own time but also motivated them to go beyond the minimum requirements. S32 suggested that after attending a formal class, her intention to review or engage in further learning would be relatively low because attending the class had already given her a sense of completion. In contrast, the self-directed learning program did not impose strict requirements, which prompted her to put extra effort into her learning.

> *I would unintentionally keep making progress without a framework and boundaries… perhaps because the resources provided by the program were more complementary. It did not state that watching these videos was enough. It gave us an environment or tool to try, and the extent to which you use it depends on the student. It provides you with a tool, not just stuffing you with a fixed quantity of something.* (S32, Interview)

At the same time, however, the characteristics of freedom and flexibility were perceived by the participants as the major weakness of the self-directed program. In particular, having freedom and flexibility in learning became the major reason why most participants were unable to maintain their learning motivation throughout the 12 weeks. As the midterm exam week approached, the significance of this program in students' time management instantly diminished, falling below the priority of exams and even other activities such as student clubs. Consequently, once the practice was interrupted, it was challenging for many participants to resume their previous levels of learning. ("*There were first midterm exams, and then other exams along the way until the final exam week… The program gave us relatively low pressure so it was pushed to the lowest priority, and eventually, I ended up not working on it.* S28, Interview)." At the end of the program, participants realized that they actually lacked self-regulation skills ("*I realized that I needed to be supervised.* S37, Interview") and would need more solid external regulation to support them throughout the 12-week self-directed learning process. The forms of external regulation suggested by the participants varied, ranging from receiving more accessible, frequent learning reminders to being formally awarded academic credits.

> *If everyone is used to receiving information from Facebook, the program could feed us something small every day…just more frequent reminders.* (S33, Interview)
> *It's actually an important task, um…important but not urgent. It's easy to overlook it…perhaps if it had some credits attached, I would put more effort into it.* (S37, Interview)

The Resource Support

The self-directed learning program of the present study provided both digital language learning resources and social resources to learners. According to the end-of-program questionnaire, participants indicated that the resource support was one of the main advantages of the self-directed program. In terms of the digital language learning resources, the advantages specifically lay in the weekly availability of recommended materials, structured themes, and the diversity of video resources.

> *Every week, there were materials available for participants to study.* (S22, Interview)
> *There were weekly themes and planned schedules, which motivated me to learn.* (S20, Interview)
> *The program offered a wealth of learning resources. I was not previously aware of so many useful websites for learning English.* (S28, Interview)

Among all the resources provided, the weekly recommended videos were used most often because they were made readily accessible to the participants. The recommended videos were perceived as the weekly minimum requirement of the listening practice and were included in the goals the participants set for themselves.

> *I think the recommended videos were very important elements of the program...For self-selected videos, I have to find them on my own. Personally, I tend to be lazy, so having the videos ready for me makes it easier to start practicing. The likelihood of me engaging in this activity would increase.* (S37, Interview)
> *I watched at least one recommended video every week.* (S9, Interview)
> *During the first few weeks, I managed to keep up with the plan by at least watching the recommended videos.* (S11, Interview)

Given the important role of the recommended videos, the sources, topics, and content of the videos consequently influenced some participants' willingness to learn every week. Although many participants indicated that the recommended videos "*sparked my* [their] *interest in other topics,* (S2, Interview)" some mentioned that the videos being from a single source would diminish their motivation. "*Towards the end, there were more TED videos, all from the same source. I am not particularly fond of TED videos, so I started to participate less in it.* (S15, Interview)"

The social resources were offered through weekly onsite discussion sessions and the Facebook forum. Many participants were unable to attend the onsite discussion sessions due to scheduling conflicts. Those who came to the sessions found it a great opportunity to practice English speaking skills and exchange ideas or learning strategies with other students.

> *I feel more confident speaking up in the discussion sessions. In the past, I was mostly afraid to do so.* (S29, Interview)
> *One of the students mentioned that she always focused on the overall organization during listening. Then I thought, "Exactly! Why was I always fixated on details?" So I started to prioritize the overall organization and look for keywords while listening.* (S37, Interview)

Social interaction on the Facebook forum was, however, less obvious. Participants generally perceived it as a platform to practice writing skills and display their thoughts. The interaction was mostly one-way, with participants submitting their responses to the questions on the Facebook as "*part of the responsibility* (S22, Interview)" and going through others' answers to "*reflect on my* [their] *own thoughts.*

(S15, Interview)" The two-way interaction was only observed between the individual student and the teacher. As S10 commented, "*There was no discussion* [on the Facebook forum] *among students; there was only discussion between the teacher and students.* (S10, Interview)" The fear of being the odd one who initiated the discussion prevented some participants from engaging in further interaction with peers on the Facebook forum. More deliberate facilitation from the teacher was even expected: "*You could have five secret teaching assistants to post something there before us.* (S26, Interview)"

The Capacity Support

The capacity support that the program provided to the participants was in line with three types of autonomy (i.e., as a communicator, learner, and person) to be fostered (Lai, 2017). Learner perceptions of the support for autonomy as a communicator, in the forms of onsite discussion sessions and the Facebook forum, have been reported in the previous section. Learner perceptions of the support for autonomy as a learner and person will be presented in this section.

Instructional videos were specifically created for the program to support the participants' self-directed learning and English listening capacity. It is noteworthy that the video viewing rate was low, according to interviews. Although most students acknowledged the value of the instructional videos, they reported that the impact of this learning support on their learning was limited for two reasons. First, many students indicated that they had already developed their own learning or listening strategies (*My strategies are good enough,* S2, Interview; *I have been using those strategies*, S34, Interview), so it was not necessary to watch the instructional videos. Second, some students recognized the differences between being aware of the learning strategies and being able to apply them and indicated that they actually needed the opportunities to apply the strategies (*Knowing is one thing, but actually applying it is another matter,* S36, Interview).

The interview data revealed that the program allowed participants to form their individual language learning ecologies, demonstrating their autonomy as a person (Lai, 2017). S10, who engaged in the program for the entire 12 weeks, is a good example for illustrating how he integrated the program into his existing language learning ecology. Before participating in the program, S10 had already cultivated the habit of immersing himself in English videos or audio programs through subscription to various platforms such as YouTube and TuneIn Radio; he also used Evernote to take notes. To him, however, this type of learning was more casual because he only watched the videos when he received notifications of new content from channels to which he had subscribed. When he was participating in the program, he began more actively constructing a "*systematic learning environment*" (S10, Interview and bi-weekly learning logs) for himself using the following approaches:

(1) Setting a regular schedule: "*I plan to practice English before going to bed and after waking up;*" (bi-weekly learning logs) "*I am now used to watching 2 English videos after waking up.*" (bi-weekly learning log)
(2) Diversifying learning materials: "*I plan to challenge myself with more advanced listening exercises over the next two weeks such as news broadcasts, academic videos, and listening to English with accents other than the American accent, to enhance the depth and breadth of my English listening skills.*" (bi-weekly listening log)
(3) Pursuing a higher level of comprehension of the listening materials: "*I am now listening more attentively. Previously, I would only take notes on things that genuinely interested me. But with the current program, I want to make the most of it and thus try to write down things I do not understand.* (Interview)" S10 even sent an email to the researcher to seek assistance in comprehending one of the videos because he was not able to resolve the comprehension difficulties even after applying his own strategies.

Discussion

In this self-directed learning context where EFL learners were endowed with greater flexibility, the results of the study indicated that their level of participation was high in the beginning but began to decline in the face of other academic obligations. A high attrition rate is a common characteristic found in self-directed language learning contexts (Cheng & Lee, 2018; Lin et al., 2016; Nielson, 2011); thus, researchers have called for instructional designs with features which can help learners resist attrition (e.g., Lai, 2017). In the present study, both quantitative and qualitative data showed that the weekly recommended videos chosen by the instructor played an important role in sustaining self-directed learning behaviors over the 12 weeks; learners prioritized these teacher-selected materials over self-selected ones and used them to set the learning agendas. This finding corroborates previous research (Cheng & Lee, 2018) indicating that external factors such as teacher support contribute to students' continuous autonomous behaviors in the self-directed language learning context. Teacher support in the program designed for the present study took various forms (e.g., advising students on learning, developing instructional videos, and leading onsite discussion sessions). According to this finding, it seems that selecting digital language learning materials and having the materials ready for learners on a regular basis had an important impact on supporting the EFL learners' self-directed learning.

The present study reveals that one of the differences between the highly engaged learners and less engaged ones was motivation. The more engaged learners demonstrated stronger intrinsic and integrative motivation, whereas their less engaged counterparts had more instrumental motivation with a prevention focus. This finding supports previous research (Kormos & Csizér, 2014; Spratt et al., 2002) showing that motivational factors influence language learners' autonomous behaviors. This finding also implies the importance of addressing motivation in designing and implementing out-of-class self-directed language learning programs for learners in different contexts. EFL learners whose language learning tended to be more restricted to the formal classroom setting were found to demonstrate more preventional instrumentality of learning English than were English-as-a-Second-Language (ESL) learners (Li, 2014). To support a greater extent of learner autonomy in the self-directed program alike, in addition to offering or recommending online learning materials to students, the instructor could further help extend their language learning experience beyond the classroom by providing various authentic e-learning materials or tools, such as by guiding students to engage in online discussions with other viewers after watching a recommended video.

Another difference between the highly engaged learners and less engaged ones was found in metacognitive awareness, suggesting that learners who persisted longer in the self-directed program demonstrated more growth in problem solving of listening metacognitive awareness. Previous research has found that metacognitive training facilitated EFL learners' autonomy (Nguyen & Gu, 2013). The finding of the present study further shows that the relationship between metacognition and autonomy could also work in the other direction. A carefully designed autonomous learning environment or even activity may foster EFL learners' metacognition. Although the highly engaged learners demonstrated significant growth in listening metacognitive awareness, they did not outperform the less engaged learners in listening competence at the end of the program. One possible explanation was that the program only lasted for 12 weeks, which was not long enough to improve learners' listening competence, especially for intermediate learners.

Participants' perceptions of the affective support revealed that a match between the design of the self-directed program and learners' beliefs or learning preferences may motivate learners' initial participation but may be insufficient to sustain their persistence throughout the entire learning process. The learners in the present study actually depended on various forms of external regulation to support their self-directed learning and even expected more of it. This finding indicates that the EFL learners in

the present study may fall on the continuum of other-regulation (Thomas et al., 2021) and demonstrate reactive autonomy (Littlewood, 1999). This stage of autonomy, if guided appropriately by teachers, may pave the way for self-regulation or proactive autonomy in the future (Littlewood, 1999; Thomas et al., 2021). To design self-directed learning programs for this type of learners, teachers would not want to exclude other-regulated learning activities, as they play a role in supporting learners' continued participation, through which other-regulation or reactive autonomy may be transformed into self-regulation or proactive autonomy.

Participants' perceptions of the resource and capacity support indicated that each learner participated in the self-directed program with their current language learning ecology; some, such as S10, had already constructed their own learning environment, and most had developed their own strategies for comprehending online listening materials. Yet, according to the interviews, some were still uncertain about the effectiveness of the learning strategies that they were using. The flexibility of a self-directed program creates an optimal opportunity for learners to exercise their agency, to analyze affordances of various types of learning support, and to select and incorporate relevant ones into their own learning ecologies to meet their individual learning goals. In fact, learners need guidance from teachers during this process to generate quality learning ecologies of their own (Lai, 2017). Future self-directed language learning programs could include more explicit teacher guidance by, for example, hosting onsite or online discussion sessions to help learners reflect on their learning process and to offer advice.

Limitations and Suggestions for Future Research

The findings of this case study were drawn from intermediate learners in higher education in Taiwan. As cultural context is an important factor in shaping learner autonomy (Benson, 2001), future research conducted in other contexts with learners of different language proficiency could shed more light on the nature of language learning beyond the classroom, from which implications can be drawn for the theory of autonomy.

The e-learning materials and digital learning tools used for the present study mainly involved web-based audios and videos, instructional videos developed by teachers, Facebook, and a university CMS. Given the advances in AI technologies in recent years, future designs of self-directed language learning programs could include the use of AI tools, which encompass more affordances of personalized and adaptive learning (Xia et al., 2023). How AI tools support and enhance language learning beyond the classroom will be of interest in the future.

Conclusion

The present study developed a blended self-directed program for EFL learners and adopted a case study approach to investigate participants' engagement in the program, the motivational factors that influenced their engagement, the program effects, and learners' perceptions of various types of support. The results revealed learner attrition, and motivation was found to be associated with levels of learner engagement in the program. Specifically, the highly engaged learners demonstrated less preventional instrumentality and had more concrete goals in learning English than the less engaged ones did. As for the effect of the program, the highly engaged learners had more gains in metacognitive awareness of listening. Qualitative data revealed that the program design matched the learners' needs and beliefs in English learning, but they actually depended on external regulation and even expected more of it to help them persist throughout the self-directed learning process. Also, as each learner had developed their own learning ecology, teacher advice may play an important role in guiding students in the appropriate incorporation of various types of learning support into their personal ecologies, which would lead to more personalized learning processes and better support learners' autonomy development.

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