

Promoting Self-directed Language Learning: Transitioning from Paper-based Materials to Online Learning Apps

Dominique Vola Ambinintsoa^a, Jo Mynard^a, Kie Yamamoto^b

^aKanda University of International Studies, 1-4-1, Wakaba, Mihama-ku Chiba-shi, Chiba-ken, Japan

^bWayo Women's University, 2-3-1 Konodai, Ichikawa, Chiba, Japan

Abstract

In this paper, the researchers provide a summary of how learners are supported in developing self-directed learning skills at a university in Japan that specializes in teaching foreign languages. The researchers describe an elective course specifically designed to help learners to set goals, choose resources, consider strategies, make a learning plan, implement their plan over one semester, and evaluate their progress. During this process, learners are supported by learning advisors as they gradually develop awareness of themselves and become more autonomous language learners. The materials used for the course have evolved from paper to technology-based ones. This paper discusses the process that the learners undertake when beginning to take charge of their language learning and shows examples of the materials used. Drawing on feedback from stakeholders and evidence of actual self-directed work and learner reflections, the paper comments on the suitability of the electronic tools and suggest how the process might be better facilitated in the future.

Keywords

Self-Directed Language Learning, Learner Autonomy, Self-Access Learning, Online Learning Settings, App, Moxtra

1. Introduction

In this paper, the authors provide a summary of how a university in Japan that specializes in teaching foreign languages supports learners in developing self-directed learning skills. The paper provides an overview of an elective course which has been designed to help learners to create and implement their own self-designed course of study. The course originally used all paper-based materials, but it has evolved over 15 years to gradually become almost completely technology-based. The authors describe the two technology-based versions of the course, show examples, and comment on how self-directed learning is facilitated. Examining feedback from stakeholders and previous research that analyzed students' self-directed work and learner reflections, the authors comment on the suitability of the electronic tools and suggest directions for the future.

To support learners in developing their self-directed learning skills, an elective course is provided for all students at a university located in Chiba, Japan. Specializing in teaching foreign languages, the university has a large Self-Access Learning Center (SALC), which has been designed to promote learner autonomy, or "the capacity to take control over one's learning" [1, p. 2]. The elective course can be taken in form of modules (called *Effective Learning Module 1* and *Effective Learning Module 2*) or courses taught as in-person classes which includes self-directed work as well (*Effective Language Learning Course 1* and *Effective Language Learning Course 2*). Modules and courses have the same aim, the same content, and students are supported by learning advisors in both. The main difference is that the courses include weekly in-class meetings with learning advisors and classmates, whereas with

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EMAIL: razafindratsimba-d@kanda.kuis.ac.jp; joanne-m@kanda.kuis.ac.jp; kie.yamamoto1109@gmail.com

ORCID: 0000-0001-5987-3242; <https://orcid.org/0000-0003-0363-6461>



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the modules, the communication with the learning advisors is mainly in written form. Although there are no classmates, activities within the modules require the students to periodically interview other learners about their opinions and experiences. The elective course has been offered at the university for more than 15 years mostly in paper-based format where learners produced hand-written reflections each week. However, in recent years, learning advisors have been offering electronic-based versions of the course (see [2–4]). This paper discusses the course, or the modules more specifically, including their aims and the evolution of the materials from paper- to electronic-based.

2. The modules

One way to promote learner autonomy is through a curriculum which supports learners in making decisions on their learning [1], and that is what the modules at the SALC aim to do. Having evolved through different phases [5], the modules have been designed to help individual learners to develop self-directed language learning (SDLL) skills. SDLL stems from the field of self-directed learning (SDL) which intends to assist learners in making their own decisions according to their personal learning goals [6]. The modules include both ‘input’ units and journal packs which include weekly activities and reflections (see Table 1). The input units aim to raise learners’ awareness on how to learn by giving them guidance on how to set goals, choose resources, consider strategies, and make a learning plan. The journal packs help learners implement their plan and evaluate their progress on a weekly basis over one semester. During this process, learners are supported by learning advisors whose role consists in giving weekly written feedback aiming to “promote a deeper level of awareness of the language learning process and trigger cognitive and metacognitive awareness” and “to keep the learners motivated and on-track with their self-study work” [7, p. 610]. Thus, by following the curriculum with the learning advisors’ support, learners are expected to gradually develop awareness of themselves and become more autonomous learners. A study on the Effective Language Learning Course 1 [8], involving an end of course survey and a document analysis of learner journals and portfolios indicated that the course (mainly taken by freshman students) effectively introduces learners to self-directed learning skills: it influences students’ thinking about their learning and induced them to learn more actively. Curry et al. [8] concluded that the course is, therefore, especially important for freshman students for their transition from high school to university. As the content of the course is the same as that of the module, it could be said that the module is highly likely to have the same impact. End of module questionnaire data for the current academic year [13] also supports this assertion. Out of 108 respondents, 24% claimed to be somewhat satisfied, 48% were satisfied, and 17% were very satisfied: 17.05%. In addition, the 93% of the respondents indicated that the module influenced their thinking in a variety of ways.

Table 1
Overview of the Effective Learning Module 1

Week	Content	Hours
1	Register for the course. Attend an orientation workshop.	3
2	Unit 1: Imagining your future	3
3	Unit 2: Goal setting	3
4	Unit 3: Strategies	3
5	Unit 4: Resources	3
6	Unit 5a: Time management or 5b Confidence and motivation	3
7	Attend a workshop: Making a learning plan	3
8	Unit 6: Learning plan	3
9 -14	Implementation of 6-week self-directed learning plan	3 x 6
15	Attend a workshop. Write and submit final report and portfolio	3
	<i>Total hours</i>	<i>45</i>

3. From paper- to electronic-based

The idea of transitioning from paper- to electronic-based materials came with the university's transition to a paperless curriculum in 2015. As the university provided iPads to each student and staff from then on, the creation of a purpose-built iPad app (Figure 1) specifically for the modules seemed opportune. As Lammons et al. [2] put it, the aim of the app was to “capitalise on the affordances of the available technology to enhance transformative learning” (p.343). Apart from supporting students' SDLL, the use of the app was expected to streamline the management system, making it easier to document and keep track of the module processes [2, 4]. With the app, the aim of the modules to promote SDLL was maintained and further reinforced thanks to the design of the app. The app was created following the Framework-for-Action (FFA) model developed by Hughes et al. [9]. The FFA model has three components: replacement, amplification, and transformation. In addition to replicating the paper-based materials (replacement), the app included interactive tools enabling learners to visualize and monitor their learning progress (amplification). It also intended to bring transformation through features allowing smooth reflective communication between learners and learning advisors, and the possibility to document activities and reflections using different options, such as audio and video.



Figure 1: The app designed for SDLL

Yamamoto and Mynard and Yamamoto [4] undertook an evaluation of the app by investigating both learners' and learning advisors' perceptions about the use of the app. The findings included several positive points, such as the learners' appreciation of easy communication between themselves and learning advisors, and the ability for learners to visualize the balance of learning activities (Figure 2), and the development of learning management skills. However, some negative points were also found. Learning advisors especially noted several unintuitive and inconvenient features of the administrative management page. For example, they found it difficult to keep track of what students added which meant that locating and reading students' comments was more time-consuming in the app than in print materials. All in all, it was concluded that the app was sufficient as a “replacement” model [9], but did not fully enable the two other components, “amplification” and “transformation” to emerge. Due to the irreparable disadvantages, the app was discontinued after two years, but experimentation and research continued.

PLANNING					DOING
SURE	Learning activities (Resources / Strategies)	Where?	When?	How long?	Actual time spent
Study ▾	I am going to learn 20 new words from the new Vocabulary book I borrowed	In the SALC	Monday and Tuesday	30 mins	40 mins
Review ▾	I will review the words using Quizlet app	On the train	Tuesday and Wed.	30 mins	20 mins
Use ▾	I will use the new words with my conversation partner. I will record our conversation.	Cafe	Thursday	30 mins	25 mins
Evaluate ▾	I will listen to our conversation and give myself a score - one point for each new word used correctly.	Home	Friday	30 mins	45 mins
choose ▾				mins	mins
choose ▾				mins	mins
choose ▾				mins	mins
choose ▾				mins	mins

Figure 2: Visualising learning management skills

4. Moxtra

In order to overcome the inadequacies of the first app, and to capitalize on some of the potential affordances of technology for learning, more recently, learning advisors have been using a commercial tool called Moxtra to facilitate the self-directed learning module. Moxtra is a collaborative social media tool designed for business communication (<http://moxtra.com/company>). Moxtra was chosen among social media tools for three reasons, according to Moore et al. [3]. Firstly, it provides an individual virtual space, called a ‘binder,’ which can be shared by a learner and his/her learning advisor. In the binder, users can upload files including pictures, videos, pdf documents and other links (see Figure 3). They can also comment and annotate the files. Moreover, they can send instant messages. Secondly, Moxtra allows for easier and more personalized interaction between a learner and a learning advisor, when compared to the paper-based materials. Thirdly, Moxtra is more convenient, as it can be used with different devices, making it possible for both learners and learning advisors to interact any time. Apart from these advantages, Moxtra includes tools, such as a whiteboard, which can be utilized if learners find it easier to express themselves using images rather than writing sentences, and to-do list, which can be used by the learning advisor to remind the learner of deadlines or used by the learners themselves about tasks they need to do. Moxtra also enables the scheduling of meetings as well as instant audio and video meetings. However, that last feature has not been used often, as the interaction tends to be through written reflections by learners and written feedback from learning advisors. When meetings are necessary, it is more convenient to meet face to face or to use Zoom, as it is the platform used for other meetings and classes at the university during the time of COVID 19.

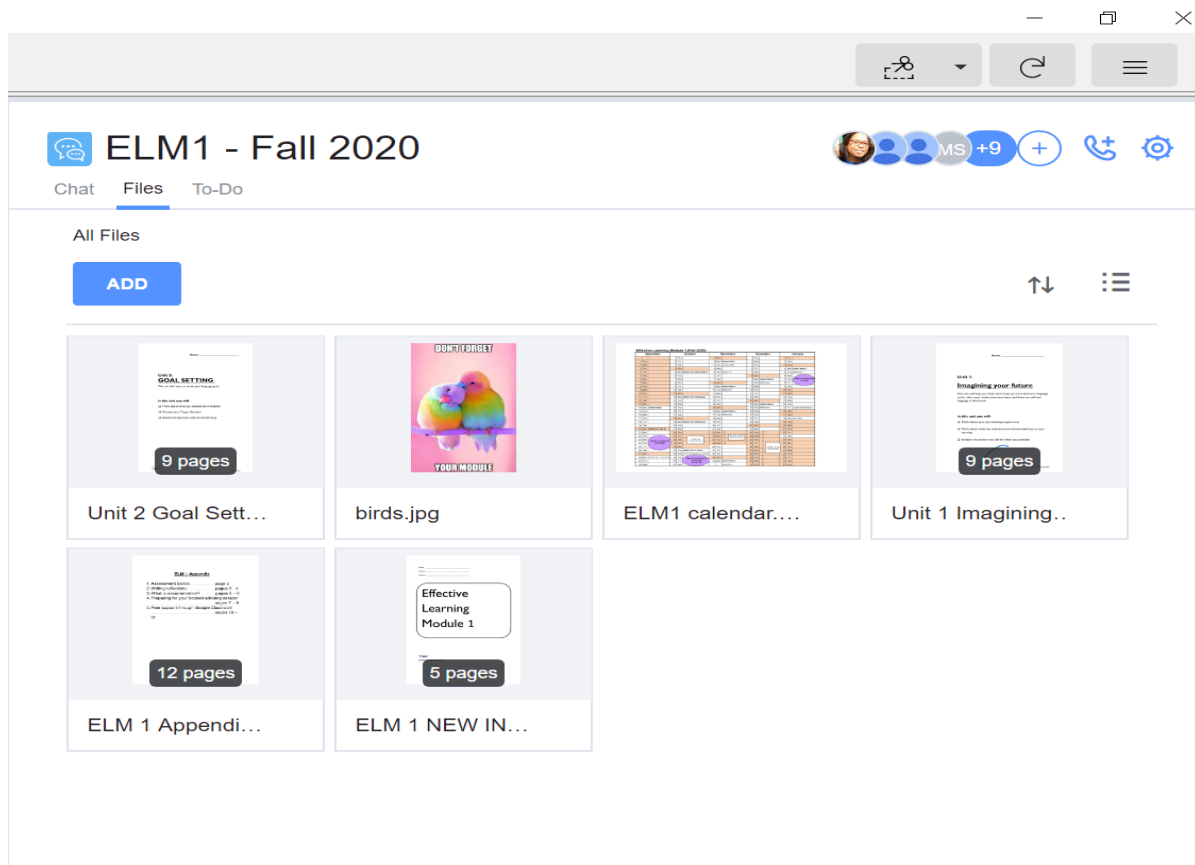


Figure 3: Binder enabling the building of a portfolio

In short, Moxtra allows ongoing written dialogue, both synchronous and asynchronous. It enables the building of a digital portfolio, in which all the files and activities related to a learner’s SDLL can be found. The portfolio enables an effective visualization of progress.

From the end of course survey at the end of the first semester of 2020 [13] students were asked about their experience using Moxtra. The results were mostly positive with 48% of the survey respondents choosing ‘positive,’ 16% ‘very positive,’ and 24% ‘neutral.’ Among the reasons mentioned by the students were the convenience of Moxtra in terms of interaction with learning advisors and of visualization of the learning process. One of the participants stated: “It was easy to see adviser comments. It was also easy to look back.”

Moxtra certainly goes beyond simple ‘replacement’ of materials [9]; the tool has the potential to promote both amplification and transformation depending on the activities that are included in the Moxtra binder and the ensuing interactions with learners. Although analysis is still ongoing, initial observations of Moxtra shows increased interactions between learners and learning advisors, and positive reactions to the multimodal resources available to learners and opportunities to share and reflect their ongoing work in multiple ways. As a research tool, there are limitations as interaction are often annotations on PDF documents which need to be extracted manually for research purposes. In addition, although there are time stamps on the activity annotations and also on the interactions, these are not collected automatically for analytic purposes. In order to understand more about how learners interact with Moxtra, some research analytic tools would be helpful.

Another reason that Moxtra was an improvement on the first app was that the learning advisors who were designing materials to use within Moxtra had the benefit of having learned from the pitfalls of the first app. In addition, the design and flow of the module facilitated by Moxtra drew upon a needs analysis that was completed in collaboration with research team members based in Sweden (see [10]).

The needs analysis included the elicitation of learning needs and goals as well as the barriers. It also included a study of the perceptions of end users (teachers, students and administrators). Although a purpose-made app might be preferable, it would need to include many of the features of Moxtra which have been observed to be particularly effective. A summary of the beneficial features and other considerations are given in the next section.

5. Conclusions: How to support SDLL with technology

Based on the authors' experiences of the transition from paper to technology, and from an in-house app to Moxtra, as well as drawing on the literature on self-regulated learning in online settings (e.g. [11]), the following can be suggested to support SDLL with technology:

1. Follow a flexible awareness-raising curriculum, providing some input, but also opportunities for experimentation and reflection.
2. Support learners through advising and provide help when needed.
3. Have learners keep written reflections and logs.
4. Provide regular feedback on learning.
5. Include visual tools for representing learning.
6. Promote interaction and sharing among students (e.g., with Google Classroom, [12])
7. Link the app within the overall learning ecology, ensuring that self-directed learning is not an "add on" but an integral part of the learning experience.

In addition, having access to learner analytics such as time on task, word count, and keyword analysis would help educators support learners more effectively. Having some of the analytics made available to learners themselves would also likely develop a higher awareness of learning and further facilitate the reflective processes.

6. References

- [1] P. Benson, *Teaching and Researching: Autonomy in Language Learning*. Routledge; 2013. doi:10.4324/9781315833767.
- [2] E. Lammons, Y. Momata, J. Mynard, J. Noguchi, S. Watkins, Developing and piloting an app for managing self-directed language learning: an action research approach, in F. Helm, L. Bradley, M. Guarda, S. Thouësny (Eds.), *Critical CALL - Proceedings of the 2015 EUROCALL Conference*, Padova, Italy, 2015, pp. 342-347. Research-Publishing.net. doi:10.14705/rpnet.2015.000356
- [3] P. J. Moore, J. Mynard, I. Wongsarnpigoon, K. Yamamoto, Autonomy and interdependence in a self-directed learning course (2019), *Relay Journal*, 2(1), 218-227. doi: 10.37237/relay/020126.
- [4] J. Mynard, K. Yamamoto. User perceptions of an app for managing self-directed language learning, *Relay Journal* (2018), 1(2), 405-428. doi: 10.37237/relay/010214.
- [5] J. Mynard, R. Stevenson, Promoting learner autonomy and self-directed learning: The evolution of a SALC curriculum, *Studies in Self-Access Learning Journal* (2017), 8(2), 169-182. doi:10.37237/080209.
- [6] R. Hiemstra, Self-directed learning: Why do most instructors still do it wrong? *International Journal of Self-Directed Learning* (2013), 10(1), 23-34. Retrieved from <http://docs.wixstatic.com/ugd/dfdeafe996f035b2094c38a1492317121bacf1.pdf>.
- [7] J. Mynard, Promoting cognitive and metacognitive awareness through self-study modules: An investigation into advisor comments, in: *Proceedings of the International Conference CLaSIC 2010 - Individual Characteristics and Subjective Variables in Language Learning*, Singapore, 2010, pp. 610-627.

- [8] N. Curry, J. Mynard, J. Noguchi, S. Watkins, Evaluating a self-directed language learning course in a Japanese university, *International Journal of Self-Directed Learning* (2017), 14(1), 17-36. http://docs.wixstatic.com/ugd/dfdeaf_385a2e4d19254f968487b6058464e00c.pdf.
- [9] J. Hughes, J. Guion, K. Brucke, Horon, K., Prescott, A. A framework for action: Intervening to increase adoption of transformative Web 2.0 learning resources. *Educational Technology* (2011), 53-61.
- [10] O. Viberg, J. Laaksolahti, Mynard, J., A. Mavroudi. Assessing the potential role of technology in promoting self-directed language learning: A collaborative project between Japan and Sweden. *Relay Journal* (2018), 1 (2), 346-359. doi: 10.37237/relay/010211.
- [11] J. Wandler, W. Imbriale. Promoting college student self-regulation in online learning environments, *Online Learning* (2017), 21(2), 1–16. doi: 10.24059/olj.v21i2.881.
- [12] W. Peeters, J. Mynard. Peer collaboration and learner autonomy in online interaction spaces, *Relay Journal* (2019), 2(2), 450-458. doi: 10.37237/relay/020218.
- [13] SALC, Effective Learning Module survey results. SurveyMonkey raw data (2020). (unpublished)