How Can I Get My Students to Study Vocabulary Between Classes?

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Abstract

'Smart' web-based applications which manage and track students' vocabulary learning offer a convenient and effective way for students to learn and review L2 vocabulary between classes, and for teachers to supervise this self-study. This paper reports on an action research project carried out at Toyo Gakuen University exploring how best to implement a course component for an English vocabulary elective class using a web-based application. Factors which were found to support the students over the three cycles of the research project are presented.

1. Introduction

If learners do not review the L2 vocabulary that they learn, much of that learning will be lost. Research shows that multiple retrievals lead to successful retention of vocabulary (Folse, 2004). For robust learning, learners need 'spaced repetition', where the intervals between review sessions become longer, with the first review taking place very soon after the items are first studied, before too much forgetting occurs (Nation, 2001:76). If learners attend weekly English classes, the following class is too late for this first review. Learners need to review between classes. It is a problem when learners lack the skills or motivation to organize and maintain this necessary self-study. This action research project set out to tackle this problem in my teaching setting.

I began teaching a vocabulary elective class for second year students at Toyo Gakuen University in April 2008. Previous research at the university had shown that our students find vocabulary learning through online flashcard applications enjoyable and effective when used during classtime, but fail to use the online resources provided for them between classes (Taylor & Birchley, 2008). The applications used in that study did not track student use, and students did not take responsibility for using them regularly, or even periodically. Concerned that little vocabulary could be effectively learned in my elective class in class time alone, I formulated the following research question:

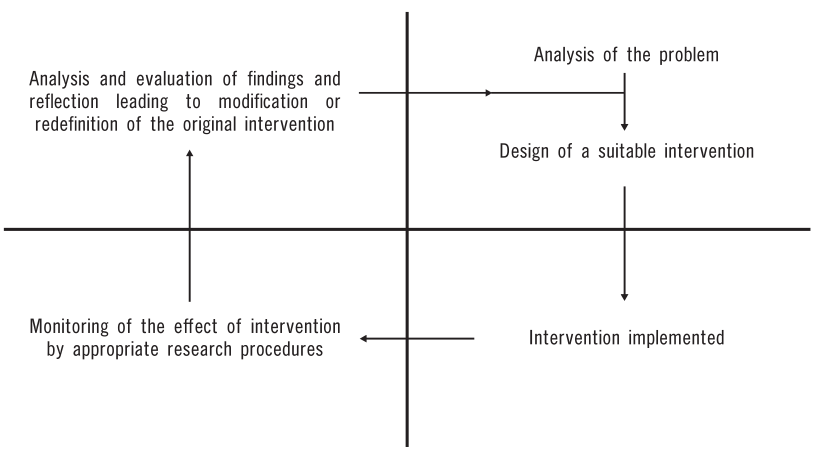
●'How can I get my students to study vocabulary regularly between classes?'

I decided that an action research approach would be helpful, since I could immediately implement a practical solution and use the research findings to develop and improve this self-study component to the course. The following section outlines the approach and methods used.

2. The Research Approach and Methods

In Opie's (2004) model of action research, analysis of the problem leads to the design of a suitable intervention, which is then implemented and monitored, leading to the modification or redesign of the intervention, in an ongoing cycle (figure 2.1).

Figure 2.1: A model of action research (Opie, 2004:80)



The intervention I implemented here was to use a flashcard application which tracks students' progress. Tracking software is effective in organizing and managing vocabulary learning for the learner (Folse, 2004:158–9, Nation, 2001:108). The fact that the teacher can tell how much study the learners are doing between classes should be a motivating force, since the students can be rewarded for this work in their course grades. The fact that students can see their own progress was also expected to be motivating.

The tool I selected was *Smart.fm*, a free web-based application which facilitates spaced repetition; the default setting on the application is 'long-term study mode' which prevents students from cramming and encourages regular study, with appropriate intervals between study sessions. In the first study session, five or ten items are introduced with a translation, example sentence(s), picture, and audio. The items are then studied through flashcards, multiple-choice quizzes, and

spelling quizzes, until the student is able to produce the correct answers, which takes several minutes. The items are then counted as 'Studied' on the students' homepage. Over the course of the next few weeks the words are reviewed in similar study sessions, and after five successful sessions the items are counted as 'Completed', and will need only periodic review. If the student performs poorly in the quizzes, more study sessions are required before the items are counted as 'Completed'.

The students were set a clear, achievable goal – to learn 200 words (until they are counted as 'Completed') at their own level within a two month period. Students were asked to choose vocabulary sets from the "Core 2,000: 基礎英語 (Basic English)" series, which covers the most frequently used 2,000 words of English and is divided into ten sets or 'steps' of 100-250 words. Approximately 10-15 minutes of class time was allocated to this work during each weekly session, and students were required to complete the rest of the study outside of classtime on their PCs or mobile devices in order to achieve a passing grade for this course.

To evaluate this intervention, I collected data on the number of words studied by each student. I also kept a log recording critical incidents observed during the class sessions. Student feedback was obtained using a short bilingual questionnaire at the end of the eight-week period, for further triangulation. Analysis of the data led to a second cycle of this project, which was then followed by a third cycle.

3. The First Cycle

During the first cycle of this project, students displayed enthusiasm in the class and enjoyed using the application. However, the data collected on the amount of vocabulary studied indicated that few of the students were studying regularly outside of class. Table 3.1 shows the number of items studied and completed by each student. The students level is indicated in the first column (FB= False Beginner, E = Elementary, PI =Intermediate). Only six of the 26 students (shaded gray) achieved the goal that was set of learning 200 words.

Feedback from the students and the teacher log highlighted a number of problems. The students lacked computer skills and failed to follow instructions. Thus, many students forgot passwords and found it difficult to log in to and use the application. Some students attempted material that was too difficult and did not progress, despite spending considerable time studying, which led to a loss of motivation. Some students did not have computer access at home and were not aware that cell phones can be used instead of PCs. There was also a lack of awareness of the

goal and pacing problems. Overall, there was a lack of motivation. The students did not care enough about passing the course or getting a good grade to use their free time to study vocabulary.

Table 3.1: Number of words studied in the first cycle

First Cycle (Summer 2008) Goal-200 words in two months		
Students' Level	Items Studied	Items Completed
FB	500	469
FB	300	300
FB	320	270
FB	400	210
FB	240	199
E	300	230
FB	130	100
E	100	100
E	100	100
PI	178	80
FB	100	70
PI	230	41
E	156	10
E	92	9
PI	203	7
E	76	2
E	95	0
PI	85	0
E	55	0
E	65	0
E	66	0
PI	50	0
E	42	0
E	15	0
E	15	0
PI	5	0

However, the results were not completely disappointing. Five of the students who achieved the goal were 'False Beginners', students who have found English very difficult in the past and who had failed to learn despite years of English instruction. This intervention had clear benefits for them, with several becoming so motivated that they far exceeded the set goal. I judged that, with modifications, this intervention had the potential to help students get into a pattern of regular study between classes. The following semester, with a new group of students, I embarked on the second cycle of this project.

4. The Second Cycle

The first modification I made to the intervention was the time period. I introduced the students to the application in the first class of the semester and required them to use it throughout the whole semester, almost four months. I extended the goal accordingly to 400 words. This gave the students more time to get used to the software and to develop study habits. I also made a record of student usernames and passwords, and doubled the time spent using the application in class to allow more time for student support. These modifications were designed to make sure the students fully understood the goal and their learning task, and could use the application comfortably, and so reduce the demotivation caused by frustration with the learning tool.

The next modification was to commit myself to completing the same amount of study as the students. I promised the students that I would learn 400 core Japanese vocabulary items on the same application during the same time period. The aim was to provide a role model for the

students, increasing motivation levels. Dörnyei (2001a) recommends that teachers inspire students by showing that they themselves value L2 learning. Here, I wanted to show students that I believe that it is worth spending time learning vocabulary, and that I have faith in the chosen materials and the learning tool. I also aimed to demonstrate a suitable learning pace, so that students would

First Cycle (Summer 2008) Goal-200 words in two months		
Students' Level	Items Studied	Items Completed
FB	500	469
FB	300	300
FB	320	270
FB	400	210
FB	240	199
E	300	230
FB	130	100
E	100	100
E	100	100
PI	178	80
FB	100	70
PI *	230	41
E	156	10
E	92	9
PI	203	7
E	76	2
E	95	0
PI	85	0
E	55	0
E	65	0
E	66	0
PI	50	0
E	42	0
E	15	0
E	15	0
PI	5	0

Second Cycle (Summer 2008) Goal-400 words in one semester		
Students' Level	Items Studied	Items Completed
E	510	500
FB	500	500
PI *	440 (670)	465 (506)
FB	511	450
FB	459	446
E	417	417
E	483	405
E	401	401
E	410	400
E	500	300
FB	405	300
FB	311	300
E	323	249
I	606	205
E	240	200
E	340	100
E	260	100
E	417	36
E	525	21
PI	471	10
PI	201	10
E	401	7
PI	304	7
E	273	7
E	183	1
FB	91	1
FB	251	0
E	171	0

* This student took the elective class for two semesters, continuing with the same vocabulary sets. The figure in parenthesis indicates the student's achievements over both semesters.

Table 4.1: Number of words studied in the first and second cycle

not leave too much learning to the end of the course.

The last modification was to use the social features of the application, adding the students to my 'friends list' so that students could easily see my progress and the progress of each member of the class. By using these social features I could check students' progress more easily, give encouragement by sending virtual 'high fives' and mail students who were falling behind.

The results from this stage are shown in table 4.1. In this cycle one third of students achieved the goal of learning 400 words, and half had completed a substantial amount of out of class study (200 words or more). This is an improvement on the results for the first cycle, but still a disappointing outcome, suggesting the need for further modifications.

Student feedback and the teacher's log raised some areas of concern. Some students were reluctant to use their cell phones for study, even though they did not have computers at home. Thus, students needed to make time to use the computer facilities on campus. The biggest problem was pacing, with students leaving study until the end of the semester, and running out of time.

Motivation was still an issue. The students were able now to see the progress of each member of the class by viewing my 'friends list'. However, since the students could see that the rest of the group were largely failing to progress, this appeared to have a negative influence on motivation.

I identified two positive outcomes from the modifications introduced in this stage. First, the students were interested in teacher progress, with some students discussing my study habits with me. Secondly, the increased time spent using the application in class had led to some instances of students receiving support from their peers and being positively influenced by the students sitting close to them.

Reflection on these findings led to further modifications to the intervention, which were implemented in the third cycle of this project in the subsequent semester, with a new group of students.

5. The Third Cycle

In the third cycle, some aspects of the intervention remained unchanged. The students were still required to learn 400 items in one semester, I continued to learn the same number of items

in Japanese. The amount of class time spent using the application remained at 20–30 minutes. There were two significant modifications.

First, to address the issue of pacing, I introduced weekly targets in addition to the semester goal. The students were required to have begun studying 100 items by the second class, and 200 by the next, and to have completed 50 items by the end of the first month, and so on. Attainment of these targets boosted students' grades. Dörnyei argues that setting proximal subgoals 'has a powerful motivating function', helping learners to organize their learning and providing 'immediate incentive' (2001a:128). I anticipated that students would attempt these smaller targets, and that resulting feelings of success and sense of progress would help maintain motivation throughout the semester.

Secondly, to promote positive peer influence, I exploited the social features of the application more. Students were required to add at least two classmates to their friends lists, so that they could send each other messages and virtual 'high fives'. I set aside the first and last five minutes of each class for face-to-face peer interaction about the targets and the material. At the start of the lesson the dialog shown in figure 5.1 was written on the whiteboard and the students were arranged into two lines. The students used the dialog prompts to talk about their progress, accepting praise when the target had been achieved and reflecting on their reasons for failing to

A: So, did you make the 'start 100' target?
B: Yes, I did! / No…
A: Well done! / Oh. What happened?
B: Thank you. / ……
And how about you?

Figure 5.1: Dialog for the start of class

A: So, tell me one of the words you learned today.
B: Cool. I see.
B: How about you? Tell me one word you learned.
A: _____
B: _____

Figure 5.2: Dialog for the end of class

meet the target when they had fallen behind. After one minute, the student moved onto the next person in the line, and this exchange was repeated several times. At the end of class, the dialog shown in figure 5.2 was written on the board and the students used this to talk to their partner about an item they had learned during the class period.

The outcome for this cycle of the project in terms of goal achievement was positive. The total number of items studied by each student are shown in table 5.1 below. 17 of the 23 students achieved the semester goal of completing 400 items, with most of the remaining students also completing a substantial amount of study.

Data collected on the students' use of the application on a weekly basis, however, raise some concerns. The students were engaging in out of class study, but records of their achievements of the weekly targets show that in many cases students cannot be said to have studied regularly or consistently (see table 5.2). Many students did not reach the targets set in the early part of the semester, and found it necessary to change the settings on the *Smart.fm* application to allow cramming in order to achieve the semester goal. Although this is disappointing, perhaps it should be expected that students who do not have time management skills to study regularly at the start of the course might take some time to develop these skills, and to find space in their schedule to slot in regular self-study sessions. It is understandable that students might at times lapse, due to illness or other commitments, and in some cases students did not join the class until more than one month had passed, and this is partly the reason for them being behind schedule. By the last 3–4 weeks most of the students have clearly made time to study between classes.

The log records show that the weekly targets were an important factor in motivating students. Indeed, recorded incidents show that some students appeared to feel a sense of achievement from reaching a target set for a previous week:

> I went to talk to student x about falling so far behind, but as I approached him I realised he was beaming and glowing with pride, and was expecting to be praised. He had reached 100, the target set for three weeks ago, and was clearly proud of this achievement. I had to hastily abandon what I had planned to say and instead offer praise and encouragement.
> (teacher's log, 5/8/09)

Student survey feedback also indicated that the weekly targets had been a major motivating

First Cycle (Summer 2008) Goal-200 words in two months			Second Cycle (Winter 2008) Goal-400 words in one semester			Third Cycle (Summer 2009) Goal-400 words in one semester		
Students' Level	Items Studied	Items Completed	Students' Level	Items Studied	Items Completed	Students' Level	Items Studied	Items Completed
FB	500	469	E	510	500	FI	642	500
FB	300	300	FB	500	500	PI	977	499
FB	320	270	PI*	440(670)	465(506)	E	687	450
FB	400	210	FB	511	450	E	453	450
FB	240	199	FB	459	446	E	460	450
E	300	230	E	417	417	E	450	450
FB	130	100	E	483	405	E	450	450
E	100	100	E	401	401	E	450	450
E	100	100	E	410	400	E	490	442
PI	178	80	E	500	300	E	449	422
FB	100	70	FB	405	300	FB	843	417
PI *	230	41	FB	311	300	FB	500	414
E	156	10	E	323	249	PI	450	408
E	92	9	I	606	205	FB	493	403
PI	203	7	E	240	200	E	500	400
E	76	2	E	340	100	FB	400	400
E	95	0	E	260	100	FB	500	400
PI	85	0	E	417	36	E	500	250
E	55	0	E	525	21	E	377	250
E	65	0	PI	471	10	FB	371	199
E	66	0	PI	201	10	FB	376	100
PI	50	0	E	401	7	PI	350	100
E	42	0	PI	304	7	FB	400	0
E	15	0	E	273	7			
E	15	0	E	183	1			
PI	5	0	FB	91	1			
			E	251	0			
			E	171	0			

*This student took the elective class for two semesters, continuing with the same vocabulary sets. The figure in parenthesis indicates the student's achievements over both semesters.

Table 5.1: Number of words studied at each stage of the project

factor. Other factors which students found highly motivating were 'seeing their friends' progress', 'wanting to get a good grade' and finding the application 'fun'. Overall, most of the students'

Weekly target (number of items to be started or completed)																						
Level	1 Start 100		2 Start 100		3 Complete 50		4 Complete 100		5 Complete 150		6 Complete 200		7 Start 300		8 Start 400		9 Complete 250		10 Complete 300		11 Complete 350		12 Complete 400	
	S		S		S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C
E	100		187		246	0	324	0	333	0	347	9	435	146	450	159	474	242	524	424	568	450	687	450
E	100		135		200	29	200	200	228	200	250	200	252	200	266	200	299	200	334	200	450	247	453	450
E	100		126		126	0	126	0	126	1	126	0	128	0	136	0	142	0	152	0	228	2	500	400
E	100		116		175	0	200	184	189	173	189	173	189	173	189	173	189	173	199	173	439	173	449	422
FB	70		200		230	0	264	0	300	0	300	0	324	102	400	115	400	149	400	225	400	300	400	400
PI	20		68		68	0	78	0	78	0	78	0	78	0	300	0	390	25	977	125	977	499	977	499
FI	×		×		5	0	10	0	12	0	250	0	350	5	500	60	599	500	608	500	642	500	642	500
E	20		200		200	0	200	0	200	171	204	200	204	200	210	200	220	200	450	201	450	450	450	450
E	20		197		200	107	450	184	450	208	450	263	450	353	450	450	460	450	460	450	460	450	460	450
PI	20		50		70	0	100	0	100	0	100	0	220	0	550	16	550	90	550	166	550	269	450	408
FB	15		189		209	0	209	0	209	0	209	0	209	99	209	99	209	99	209	99	209	99	371	199
FB	15		94		100	0	100	0	190	0	198	0	198	0	200	0	200	0	200	0	200	0	400	0
FB	10		70		100	0	100	0	210	8	210	9	210	15	210	15	220	24	235	25	235	20	500	400
FB	10		50		202	0	202	0	248	10	248	10	248	10	248	10	248	10	248	10	328	50	493	403
FB	10		48		90	0	96	0	146	0	158	0	168	2	183	19	237	44	247	44	310	81	500	414
E	×		184		184	0	200	0	200	19	230	200	318	200	371	200	390	200	429	200	450	322	450	450
E	×		62		71	0	73	0	141	0	141	0	250	8	250	8	250	8	340	37	399	49	500	250
FB	×		55		63	0	65	0	75	0	75	0	75	0	360	100	376	100	376	100	376	100	376	100
E	×		26		26	0	63	0	112	0	122	0	178	3	236	12	190	77	250	229	309	229	377	250
E	×		15		15	0	155	0	187	0	203	0	217	1	436	199	466	20	490	442	490	442	490	442
E	×		15		15	0	21	0	25	0	25	0	129	0	250	13	322	34	450	450	450	450	450	450
FI	×		×		15	0	120	0	130	0	130	0	180	0	228	0	238	0	238	100	350	100	350	100
FI	×		×		×	×	25	0	25	0	25	0	310	0	503	129	644	381	843	417	843	417	843	417

Table 5.2: Number of words studied each week in the third cycle

comments related to the fact that they found the application 'effective' or 'useful'. This is likely to have contributed to their growing motivation to study between classes.

6. Conclusions

This action research project has established that most of my students will study vocabulary between classes when set clear vocabulary targets and goals, and monitored through a web-based learning application which manages and tracks their progress. Each cycle of the project led to a deeper understanding of our students' needs.

As the project progressed, I became better able to understand how to motivate the students that I teach to study vocabulary regularly outside of class time. I became better able to appreciate that our students need time and support to become comfortable with a learning tool. I realized that our students benefit from having encouragement from their peers as well as their teacher. I also realized that many of the students are unable to chunk a larger goal into manageable smaller targets without guidance and support.

The project was a learning experience for me. Casanave (2009) advocates 'perspective taking', inviting us to consider what it might be like to be one of our students. She suggests that we ask ourselves questions, such as: 'Do you give assignments that you yourself could realistically [and would willingly] do?' and 'How would you react to your own homework assignments?' arguing that by considering our answers we can engage with the experiences of our students, and gain insights and growth. By committing myself to reaching the same vocabulary targets and goal as my students, using the same application, I felt I was able to engage strongly with their experience. I experienced difficulties with juggling other demands to meet the targets, and at one stage resorted to cramming. I received virtual 'high fives' from my students for reaching targets, experiencing firsthand the pleasure this brings. I was also able to feel the satisfaction that comes from making steady progress, and the occasional boredom that comes from a repeated activity. Overall, I felt that this brought me closer in rapport with the students, strengthening our relationship, a benefit which I had not expected at the outset of this project.

It is important to bear in mind the limitations of this research project. Since each of these groups consisted of different students, I cannot be sure that the modifications to my initial intervention alone accounted for the clear difference in outcomes for the three groups. The students in the last class may simply have been more compliant or more motivated than those in the previous groups. The next cycle of this project will be to use the intervention without further

modification with the next class of students, to evaluate how far this approach helps the students to study vocabulary regularly between classes. I am confident that the insights gained through this project will help me to support these students empathetically as they develop effective study habits.

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