

1500 word vocabulary increase in one year studying 10 minutes each day: Is it possible?

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Introduction

This is a case study paper-presentation reporting on the material used and the results achieved over a 39 week online vocabulary learning programme from April 2013 to January 2014 in Miyagi Gakuin's English department.

[Full article can be downloaded at: <http://www.wordengine.jp/research/research>]

Resource: Word Engine

13000 words

TOEIC 6480 word subset

spaced repetition

finally word *acquired*

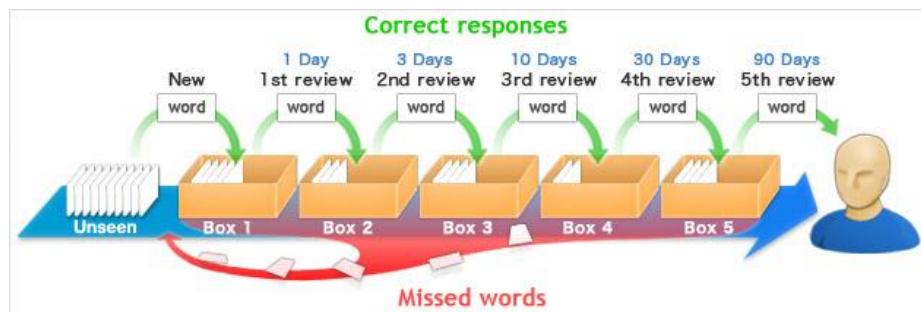
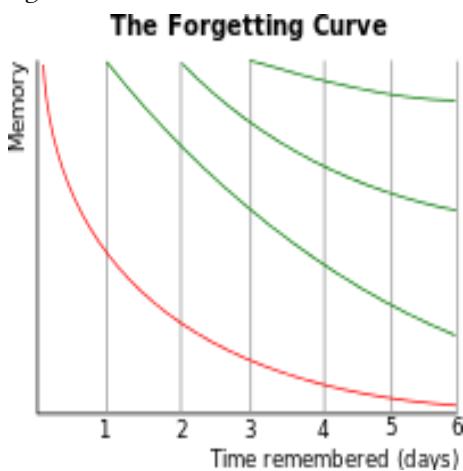


fig. 1

Theory supporting Word Engine design

1895 Dr. Hermann Ebbinghaus¹ - 'The forgetting curve'²

fig. 2



Pilot Study: Miyagi Gakuin

- 22 second year students.
- goal of learning 200 words a month
- studying 10 minutes each day
- 30% of the class grade
- teacher commented on student performance
- 20 students increased vocabulary by +2000
- 2 Ss increased by only 1382 & 1372 words)
- participation rates high throughout the year

Table 1

A Comparison to 4 other examples of Word engine being used at university level

Case study	Weekly Goals?	Integrated into curriculum?	Teacher Feedback?	Participation Level?
1	150 clicks	?	No	LOW (Only 20%)
2	No	No	No	VERY LOW (Only 5%)
3	200 clicks	Yes 2% a week	Yes	HIGH
4	150 clicks	Yes 3% a week	Yes	HIGH
Pilot	Time based ³	Yes 30% a term	Yes	HIGH

¹ see Baddeley (1982) chapter 2

² http://en.wikipedia.org/wiki/Forgetting_curve

³ originally Word Engine used *time* not correct clicks to set weekly goals

Five themes from theories on human motivation.

Human motivation is at its highest when people:

- are competent
- have sufficient autonomy
- set worthwhile goals
- get feedback
- are affirmed by others

(Walker and Symons (1997)⁴

2013 Study: Method

Each student took the V-check placement test.

An ‘*unseen*⁵’ stack peculiar to each student was created.

Access Card bought from COOP - code used to set up account.

The program was used for 10 minutes at the beginning of each listening class.

All students had one listening class a week. TOEIC word subset was used.

On other days students were expected to study for 10 minutes each day.

Access was via any device in or outside the university that had an internet connection.

Weekly Goal 300 correct clicks of the mouse.

Teacher tracks student performance and gives weekly feedback to the class.

2013 Study: Results

Table 2. How much vocabulary was learnt or acquired?

How much Vocabulary was learnt?				And acquired or nearly acquired?	
	start date	end date	vocabulary items learnt	nearly acquired (Box 5 total)	vocabulary items acquired
1st & 2nd years	2494	3822	1328	160	880
1st year only	2439	3872	1433	165	979
2nd year only	2566	3758	1192	154	751
1st yr A class	2742	4462	1720	210	1150
1st yr B class	2250	3503	1253	137	872
2nd yr A class	2741	4216	1476	177	972
2nd yr B class	2427	3394	967	137	576

⁴ reported in Dornyei (2001) chapter 2

⁵ As shown on the diagram at the top of page one

Table 3. How many hours did students study and what % of responses were correct?

	Hours	CR Ratio %
1st & 2nd years	27	79
1st year only	29	79
2nd year only	24	79
1st year A class	31	81
1st year B class	28	77
2nd year A class	26	83
2nd year B class	23	77

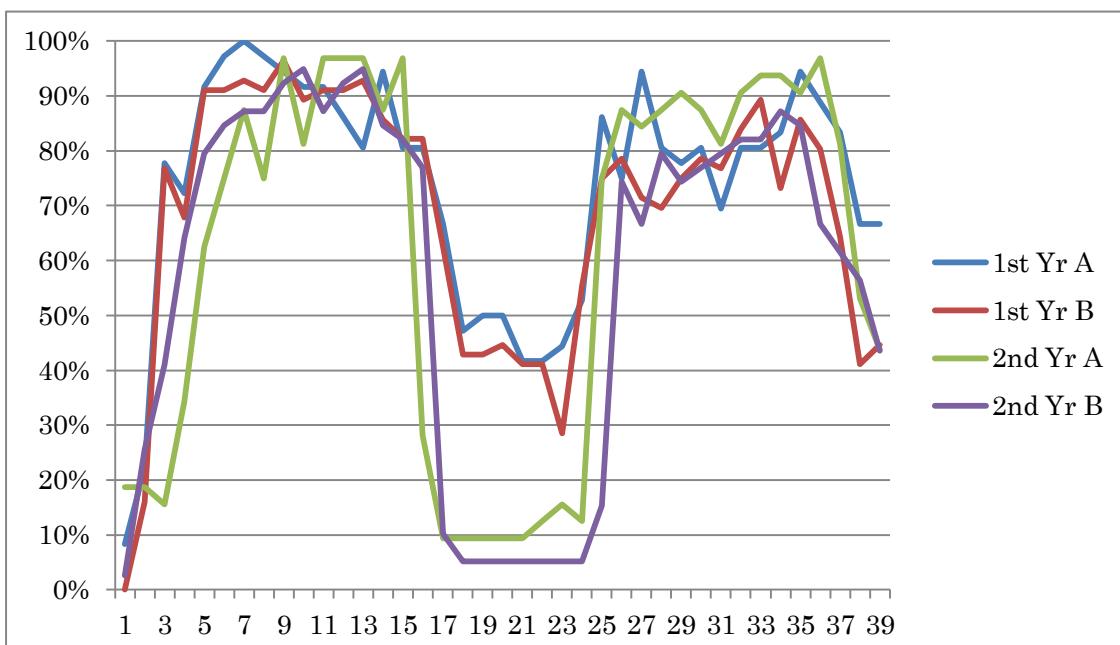
[CR ratio is calculated by comparing the number of correct clicks to the total number of clicks]

Table 4. Did students attain the weekly goals?

	GOALS				
	Hits	SD	Minimum	Maximum	#Ss>36hits
1st & 2nd yrs	26	7.25	4	39	21
1st year only	28	7.72	4	39	19
2nd year only	24	5.80	8	38	2
1st yr A class	30	6.58	15	39	7
1st yr B class	27	8.28	4	39	12
2nd yr A class	25	4.70	17	38	1
2nd yr B class	23	6.45	8	38	1

The 'hits' column is out of a maximum of 39 if summer and winter holiday weeks are included and is out of 29 if they are not.

fig.3 What % of students hit the weekly target for each of the four classes?



Questionnaire Results

- a) 95% of students answered “yes” or “yes a lot” when asked if they felt that using Word Engine was increasing their known vocabulary.
- b) “Would you study if there were no weekly goals?” 15% replied they would study “More or a lot more”. 37% thought they would study the same amount but a majority 48% stated they would study “Less or a lot less” if there weren’t any weekly goals.
- c) 82% chose 300 correct clicks as the most appropriate goal for the following semester.
- d) Only 4% of students studied in the ideal way i.e. 10 minutes a day. 14% studied five or six times a week and the majority 53% studied three or four times a week. 29% only studied once or twice a week.
- e) Where and what devices did students used to access the online programme?, Home computer (73%) and university computers (63%) were the most popular. Mobile phones were also widely used (43%) whilst Tablet PCs were used by just 3%.

Discussion

This study confirms the importance of:

- 1) setting specific and challenging goals
- 2) integrating them into the overall grade for the class.
- 3) *affirming student achievement* each week has a positive effect on motivation
- 4) the significant choices should be made by the teacher
- 5) key factors are; *importance, utility and interest* to students rather than choice per se

Next Research

As knowing what words mean is necessary to improving overall English ability, any measure of such ability, such as a TOEIC score, should reflect this improvement. From 2014 April this study will be continued providing a second year’s worth of data including a comparison to TOEIC scores.

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References:

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- Dornyei, Z. (2001). *Teaching and researching motivation*. Harlow, UK: Pearson.
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