How effective can extensive reading be?
Comments on Robb and Kano (2013)

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After reading Robb and Kano's (2013) study, I was impressed with the sample size of their data pool and results. I think that university administrators should carefully consider their study, since its implications may be applicable across disciplines. Robb and Kano (2013) obtained significant results, shedding more light on how extensive reading can be effective. While reading their study, since I considered their data important, I put the results on a standardized scale in order to shed more light on how effective extensive reading might be. In looking at only reading comprehension, Robb and Kano (2013) revealed the following results:

Table 1. *Descriptive statistics of reading comprehension from Robb and Kano (2013)*

Group	Ne	Nc	Xe	Xc	SDe	SDc
Economics	543	555	15.64	11.59	4.2	3.9
Business	587	675	16.02	12.06	4.4	4.2
Law	546	512	15.56	11.00	4.2	4.3
Foreign Language	254	281	16.00	11.33	4.6	5.1
Science	100	111	15.07	10.75	4.8	4.2
Technology	48	63	14.81	11.90	4.8	4.1
Computer	142	145	15.86	10.64	3.8	4.0

Note. Ne = Number of participants in experimental group; Nc= Number of participants in comparison group; Xe= Mean of the experimental group; Xc= Mean of the control group; SDe=Standard Deviation of the experimental group; SDc=Standard Deviation of the control group

I used the above information to calculate effect sizes (Wilson, 2001) in order to not only determine whether the difference was significant, but also how much difference the results were showing.

Table 2. *Effect sizes of reading comprehension scores from Robb and Kano (2013)*

Group	d
Economics	.9997
Business	.9222
Law	1.0733
Foreign Language	.9591
Science	.9612
Technology	.6590
Computer	1.3300
Mean d	.9875

Note. d = Effect size, or standardized difference between experimental and control means

After extracting the effect sizes, I averaged them and came up with an overall average effect size of .99[1]. According to Robb and Kano's (2013) study, L2 learners with extensive reading should perform about one standard deviation above those without such treatment. Assuming an effect size of .0 would equal 50% of learners with the extensive reading would perform higher on reading comprehension tests than those without extensive reading (no effect, in other words, because both groups would be equal at 50%). Thus, an effect size of .99 would mean that approximately 84% of students with extensive reading should perform higher on tests of reading comprehension than those without. This is a large effect size and an important finding. University administrators concerned about second language (L2) competency should take note of this study and incentivize extensive reading for students across disciplines in a similar way.

It is also interesting that the approach was fairly simple: the student simply received a sheet of paper and instructions on how to get books and access MoodleReader. Yet the results are quite large even with only 70% cooperation of the students. Amazingly, there was no real classroom instruction; there was simply the requirement to read a certain number of books and take assessments. Such an assignment seems to be based on a belief in the learner's ability to empower him- or herself in L2 learning, which is confirmed by the results.

Another question one could ask is whether these results might have influenced other competencies. Thus, I thought it would be interesting to calculate the overall effect size of the listening results. Here are the descriptive statistics for the listening tests:

Table 3. *Descriptive statistics of listening comprehension from Robb and Kano (2013)*

Group	Ne	Nc	Xe	Xc	SDe	SDc
Economics	543	555	17.39	16.72	4.0	5.2
Business	587	675	16.92	15.96	3.9	4.7
Law	546	512	16.87	16.00	4.0	5.7
Foreign Language	254	281	18.77	16.54	5.1	6.9
Science	100	111	17.07	16.04	4.6	6.0
Technology	48	63	17.00	17.65	4.0	4.8
Computer	142	145	16.63	16.55	3.7	5.4

Below are the effect sizes for the scores of listening comprehension:

Table 4. *Effect sizes of listening comprehension scores from Robb and Kano (2013)*

Group	d
Economics	.1442
Business	.2209
Law	.1777
Foreign Language	.3649
Science	.1914
Technology	-.1453
Computer	.0173
Mean *d*	.1387

The mean effect size in Table 4 rounded to .14 which, if transferred to a percentage scale, would indicate that approximately 54% of learners with the extensive reading treatment will perform higher on listening comprehension tests than those without extensive reading. This is not a very strong finding, but it does suggest that generally, improvement in reading can more positively affect listening comprehension, especially given that 30% of the students did not even participate in the program. Interestingly, the foreign language (FL) students had an effect size of .36 for listening comprehension, which means, at least for that pool of students, 63% of learners who did extensive reading performed higher on tests of listening comprehension than those who did not have extensive reading. Therefore, it can be said that there is a positive effect of extensive reading on listening competency. Such findings should be further studied in a more longitudinal study or with even better participation. My guess is, along with Robb and Kano (2013), that the treatment could be even more effective.

In sum, it seems that Robb and Kano (2013) are correct in asserting that the extensive reading was an important part of students' education. Extensive reading seems to be effective across subjects with the exception of technology students. Of course, the sample size of the technology group was comparatively small and therefore contradictory results of the Robb and Kano's study should be viewed with suspicion, especially when compared to the average effect size of all studies. Very likely, extensive reading increases vocabulary (Krashen, 1989) and grammatical L2 knowledge, which may in turn significantly increase reading and listening comprehension scores. Because vocabulary and grammar are so essential to L2 learning, it seems plausible that extensive reading could positively influence speaking and writing as well.

Notes

1. I also entered the data in Comprehensive Meta-Analysis (2001) and found, when the studies were weighted and converted to a Hedges *g*, which is arguably a slightly more accurate effect size, that they were essentially the same effect sizes with a weighted Hedges *g* of 1.002 for reading comprehension and .179 for listening comprehension.

References

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