

snappet



The **Effects** of Snappet

Effects of an adaptive learning platform on learning results and motivation of students

J.M. Faber and A.J. Visscher, Twente University – January 2016

Executive summary

In this report we describe the effects of Snappet on learning results and learning motivation of 4th grade elementary school students (equivalent to 2nd grade in the United States). Snappet is an adaptive learning platform ([Visit the website](#)). Students do exercises on a device that are substantively similar to the exercises in traditional workbooks. The benefits of Snappet are: 1) students receive immediate feedback on exercises, 2) students can do adaptive exercises according to their actual learning level, and 3) teachers have direct insight during lessons into the progress of individual pupils and the entire class. More and more schools are using Snappet. Research can provide insight into how digital tools can be optimally used in educational practice. Kennisnet therefore commissioned this research, which was carried out in partnership with Twente University.

The following questions were central:

1. What is the effect of Snappet on learning results?

2. What is the effect of Snappet on students' motivation?

3. What is the relationship between the frequency of differentiation activities by teachers using Snappet and the impact on learning results?

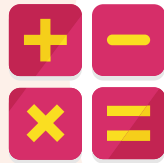
4. What is the relationship between the intensity of Snappet use by students and the effects on motivation and learning results?



The project involved 79 primary schools from the Dutch province of Overijssel. In 40 of these schools, fourth grade students (equivalent to 2nd grade in the United States) and their teachers worked with Snappet for five to six months, whereas the other schools acted as a reference group (controls). The assignment of schools to the experimental and control groups was random. Some of the experimental schools used Snappet for the subject of mathematics, other schools for both mathematics and spelling. Teachers who worked with Snappet participated in a start-lesson training provided by Snappet and were also coached by Snappet during the study.


“All students benefit from Snappet”





We used five research tools to collect the research data. To measure the effects on learning results the Cito LVS tests (standardized national tests as part of a student tracking system) for mathematics and spelling were used. To measure the effects on learning motivation the students filled in a motivation questionnaire at the end of the study. The last two research questions were answered using classroom observation during lessons, as well as data export of tablet usage with a record of exercises made. Finally, a teacher survey was conducted in order to better interpret the results.

Our results show that half a school year of using Snappet in fourth grade (equivalent to 2nd grade in the United States) has a positive effect on the Cito LVS mathematics results. The magnitude of the effect is on average 2.63 “skill points”, which is a gain of about 1.5 months of additional education/learning. All students benefit from Snappet, but the 20% highest scoring students benefit the most. A possible explanation for the latter is that Snappet students are able to work more independently at their own level, and that this is particularly advantageous. Further research is needed to determine how these systems



could be used more effectively in language subjects. Perhaps writing and reading on paper is of greater importance for language subjects than for mathematics (Mangen, Walgermo, & Brønnick, 2013).

One reason for many schools to implement digital learning resources is to increase learning motivation (Van der Meij, Kemps, Highland & Rutten, 2015). The results of our research show that students who worked with Snappet on average were slightly more positive about the subject of spelling than students who did not work with Snappet (0.3 points higher on a scale of 1-5). A similar effect on the motivation for mathematics was not found.

Furthermore, our results show that students had a higher average proficiency score for mathematics when they were taught by teachers who used more Snappet feedback to differentiate their teaching. Teachers say they see many advantages of Snappet's differentiation potential. They mention Snappet feedback as providing direct insight into the progress of lessons and into students' results and that they can coach students in a faster and more focused way. Teacher performance also increased as a result of using Snappet and could grow further, particularly with students who have average or below performance levels, with more intensive training and coaching.



Besides the frequency of differentiation activities by teachers, the intensity of Snappet use by students also had a (small) impact on learning results. Students who did many exercises had a higher average proficiency score for mathematics and spelling than students who made fewer exercises.

For more details on this research please contact us at support@snappet.org.

snappet

us.snappet.org

“Higher Math scores
after working 6 months
with Snappet.”

Professor A. Visscher,
Universiteit Twente

+40%

**better learning results,
scientifically proven***

Proven by independent research

- ✓ Strongly improved learning outcomes
- ✓ Improvements for students at all levels
- ✓ The more Snappet is used, the better the results
- ✓ Snappet has a clear benefit for teachers

Kennisnet

**UNIVERSITY
OF TWENTE.**

Radboud Universiteit

