Strategic reading with assistive reading technology – eight strategies for dyslexic pupils
The background for eight technology based reading strategies

Report:
Project It and dyslexia (2016)
*Elisabeth Arnbak and Dorthe Klint Petersen*
- Too few pupils in 5th grade use their assistive technology – why?

Ph.D.:
Technology based reading and writing in school (2016)
*Helle Bundgaard Svendsen*
- Students’ strategies for technology based reading and writing

Project:
Strategies when reading digital professional texts (2017)
*Signe Elmstrøm*
- Testing my hypothesis on explicit teaching in technology based reading strategies in 4th grade
Strategic reading with assistive reading technology

Signe Elmstrøm (2018), Thesis:

Hypothesis:
My hypothesis is that dyslexic pupils who receive explicit teaching in using technology based reading strategies will become more aware of their use of strategies and thereby have a more solid basis for being able to choose appropriate strategies in correlation with their own capacity, the text type and reading purpose, which leads to more effective reading.
Way of reading
Skimming - reading closely

Assistive reading
Word, sentence, paragraph, speed

Split view

Monitoring the text

Stop, check, reread

Underlining
Words that need to be checked

Look up words
Dictionary – picture search

Ask

Læs strategisk med læseteknologi af Signe Elmstrøm ©
In Denmark

- Many schools have implemented technology
  - Computers, Chromebooks, tablets, interactive boards
- Assistive reading- and writing technology is available for most pupils
- 3rd grade (March): Screening for dyslexia if there is a reasonable suspicion
- Dyslexic pupils have a right to receive assistive technology from their school
**Reciprocal teaching**

“Reciprocal teaching provides an excellent model for all strategy instruction” (Shanahan, 2005, p. 31).

“I do it-We do it-You do it” (Shanahan, 2005, p. 32).

### 6 phases in teaching technology based reading strategies

<table>
<thead>
<tr>
<th>Phase</th>
<th>Participants</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Introduction</td>
<td>Teacher</td>
<td>Introduction to the strategies</td>
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<tr>
<td>Modeling</td>
<td>Teacher</td>
<td>The teacher works with the first half of an assignment, text 1 and shows how</td>
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<td>and tells why the strategies can be used when reading digital texts.</td>
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<tr>
<td>Consolidation 1</td>
<td>Pupils +</td>
<td>The pupils work together in pairs on the rest of the assignments, text 1</td>
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<td></td>
<td>teacher</td>
<td>and have the opportunity to imitate the teacher’s approach to the strategies.</td>
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<td>The teacher sits next to pupils and observes and interferes when necessary.</td>
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<tr>
<td>Consolidation 2</td>
<td>Pupils</td>
<td>The pupils work together on a new assignment, text 2, which is similar to</td>
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<td>text 1 to repeat the strategies. The teacher acts as a counselor when needed.</td>
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<tr>
<td>Repetition</td>
<td>Pupils +</td>
<td>The pupils tell each other about their use of strategies. The teacher listens</td>
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<td></td>
<td>teacher</td>
<td>and asks questions to make the pupils reflect on their learning.</td>
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<tr>
<td>Implementation</td>
<td>Teacher +</td>
<td>The pupils practice their use of strategies in class over a longer period of</td>
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<tr>
<td></td>
<td>pupils</td>
<td>time. The teacher must establish the right settings for implementing the</td>
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<td></td>
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<td>strategies.</td>
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</table>
What to do when modeling

Take the pupils' perspective: What do you think the pupils need to know to work on their own?

Ask questions while modeling to enter a dialogue with the pupils to encourage the pupils meta consciousness:

- What would you have done?
- How can you do it differently?
- What would have been a good thing to do?

<table>
<thead>
<tr>
<th>Before reading</th>
<th>During reading</th>
<th>After reading</th>
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</thead>
<tbody>
<tr>
<td>• Create an overview of the text and the assignment</td>
<td>• Read the question; how can you find the answer in the text?</td>
<td>• Check out the underlined words by using dictionary and/or running a picture search</td>
</tr>
<tr>
<td>• Chose a way to read that matches the text and reading purpose</td>
<td>• Skim read by using the keywords from the question</td>
<td>• Ask someone who can help when needed</td>
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<td>• Chose how much reading aloud is needed; adjust the speed</td>
<td>• Read closely the paragraph in the text that contains the marked keyword</td>
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<td>• Split view so both text and assignment are visible at the same time</td>
<td>• Re-adjust the speed if needed</td>
<td></td>
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<tr>
<td>• Monitoring the text – how?</td>
<td>• Stop, check and reread words that either doesn't make sense or need extra attention</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Underline words that need to be examined further</td>
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</tbody>
</table>
What did my study show?

- That it’s essential with explicit instructions in technology based reading strategies.
- That the pupils became more aware of their use of strategies and their reading – and it takes time to adapt to new strategies.
- That the implementation phase is crucial for the pupils’ use of reading technology in class.
- That it’s important that the pupils work together.
- That the teacher and the pupils learn together in the process.
- That eight strategies are too many to learn at the same time and that not all the strategies are suitable for all kinds of assignments and type of texts.
- That it’s not possible to predict all the challenges – and that’s okay.
- That it’s important to work on developing the pupils’ self-awareness, self-efficacy (Bandura, 2012) and their approach to self-regulated learning (Zimmerman, 1990).

(Elmstrøm, 2017)
You can download the strategies here (in Danish)

https://www.ucviden.dk/portal/da/persons/signe-elmstroem-rasmussen2bfe195-0434-481b-933a-d63c099da1ad.html


