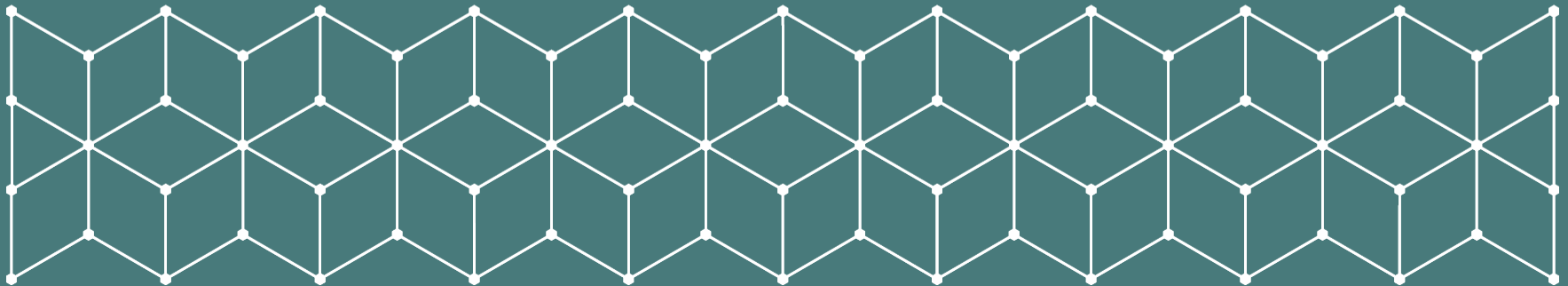


Studying with Dyslexia: Study strategies, reading history and study motivation



Introduction

Students with dyslexia in higher education

- Continuing challenges related to word recognition, reading rate and spelling
- Some still poor decoders and spellers – others are not (e.g. Fink, 1998) - a heterogeneous group
- Self regulated study-strategies required (Zimmerman, 2000)
 - Goal-directed cognitive processes and behavioral actions characterizing successful studying
- The importance of self-efficacy perceptions (Bandura, 1997)
 - «... beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments» (p. 3)

What do we know about strategy use among bachelor students with dyslexia?

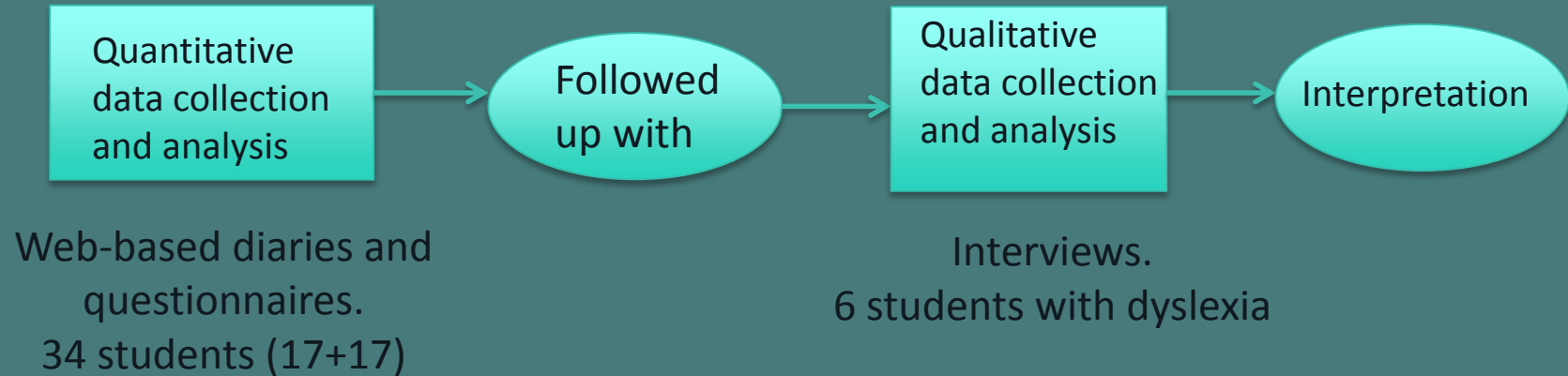
- Poor strategic learners (Bergey et al., in press; Heiman & Precel, 2003; Stampolizis & Polychronopoulou, 2009)
- Preference of compensational strategies (Bråten, Amundsen, & Samuelstuen, 2010; Corkett, Parrila, & Hein, 2006; Pino & Mortari, 2014)
 - Oral, visual and social strategies
- Broad range of strategies (Chevalier, et al., in press; Corkett, Parrila, & Hein; 2006, Pino & Mortari, 2014)

Research questions

1. What characterizes dyslexic first year bachelor students' use of self-regulated study strategies in lecture, individual study, and social study contexts?
2. What characterizes dyslexic first year bachelor students' study motivation?
3. What are the relationships between dyslexic first year bachelor students' perceived self-efficacy, use of self-regulated study strategies and their history of reading difficulties?

Method

Explanatory sequential mixed method study



Web based diary used for 12 consecutive days

- A total of 34 first-year students at a public university college in south-east Norway
 - 17 participants were diagnosed with dyslexia and 17 participants without diagnosis
 - The students attended six different bachelor-level programs of professional education: teaching ($n = 10$), social work ($n = 10$), economics ($n = 6$), engineering ($n = 4$), English ($n = 2$), and international communication ($n = 2$).

Web based diary method

- **3 study contexts**
 - Lectures
 - Individual study
 - Social study
- **Self-regulated study strategies**
- **Perceived benefits of the study strategies**

Follow-up interviews

- 6 of the 17 students with dyslexia participated - 3 high on reported strategy use, and 3 low on reported strategy use*
- One hour interviews with each of the 6 students.
They were asked to elaborate on what they reported about their study strategies in their daily diaries. Also they were asked about study motivation and reading history.







*Strategy use is calculated as the sum-score of students' total number of days reporting to use certain study strategies related to lecture participation, individual study context, and social study context reported

Results

Descriptive statistics and Spearman correlations for all dyslexic students (below the diagonal) and all non-dyslexic students (above the diagonal)

Variable	1	2	3	4	<i>M</i>	<i>SD</i>
1. Perceived self-efficacy	-	-.26	.33	.36	5.13	1.09
2. Self-regulated strategies	.47	-	.05	-.19	28.06	14.32
3. Grade points	.55*	.36	-	.11	3.30	.77
4. ARHQ	-.24	-.10	-.12	-	31.15	11.19
<i>M</i>	4.68	29.29	2.93	51.20	-	
<i>SD</i>	1.08	11.05	.89	10.67		-

*Note. * $p < .05$.*

Id	Bachelor -level program	Gender	Grade points 1. year bachelor	Self-eff. (1-7)	ARHQ	Strategy use	Key strategy
Rita 	International Comm.	F	3.50	3.13	56	30	Own drawings Audio-books
Michelle 	Economics	F	3.50	6.00	39	30	Audio-books Consulting fellow students
Desmond 	Teaching	M	3.33	6.16	34	39	Consulting teachers and fellow students
Eleanor 	Economics	F	0.50	3.13	49	2	Own drawings
Molly 	Social work	F	2.00	4.50	56	11	Consulting fellow students
Martha 	Social work	F	0.50	3.38	57	26	Audio-books Own drawings

Rita



ARHQ	Strat. use	Self-eff.
High	High	Low

All over my apartment I attach memos on walls and cabinets. I connect images to the written keywords

Audio-books are also very helpful to me

I was very demotivated and generally fed up. I think I would have quit if it wasn't for the Student Support Center

Michelle



ARHQ	Strat. use	Self-eff.
Low	High	Low

The best that I do is listening to audio-books.
It is incredible helpful to me

I also benefit a lot working with peers

In the beginning I wasn't sure if I would
manage to complete.
But I will surely get a Bachelor degree

Desmond



ARHQ	Strat. use	Self-eff.
Low	High	High

I prefer to attend as many lectures as possible. Discussing with, and asking the teachers afterwards - very beneficial

**I find the study very interesting and exiting.
I'm not satisfied with less than A or B**

Eleanor



ARHQ	Strat. use	Self-eff.
Medium	Low	Low

I try to avoid the textbooks, because my own drawings connected to lectures are more beneficial

My aim is to pass the study – not to get good grades

Molly

ARHQ	Strat. use	Self-eff.
High	Low	Middel



I consult my fellow students a lot.
I consult with others students, because they
explain in a way that makes me understand

**The first grade i got was a D. I was really
happy because I expected an E**

Martha



ARHQ	Strat. use	Self-eff.
High	Low	Low

When I leave Campus, heading for home, I often listen to audio-book (text-books) on my cell phone

I write on «flip-overs» to recognise and remember words and definitions

Attending lectures and participating in study groups didn't work for me

Differences between students with dyslexia

- Different key strategies
- Different degree of self-efficacy
- Different degree of reading difficulties
- Differences related to grade points

Similarities between students with dyslexia

- Support from family and friends
- Excited about transition to higher education
- Difficulties of reading to learn
- Different compensational study strategies (key strategies)
- Preference of social study strategies

Discussion

Key findings from both studies

- Students with dyslexia seems to be a heterogeneous group.
- Individual differences in repertoire and amount of strategy use.
- Individual differences in study motivation.
- Reading difficulties (ARHQ) seems to influence on strategy use and motivation (self-efficacy).

Limitations

- Small sample size
- Pre-selected study strategies may affect student's responses
- The delay between the diaries and the interviews

Implications for practice

- Teach study strategies for students
- Give students opportunities to get experiences with study strategies
- Students must be introduced to their rights and to suitable tools to cope with dyslexia
- Create study environment to stimulate social study activities

Thank you for your attention!

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