

### Fostering Reading “Empeerially” – Help for Struggling Readers by Means of Cooperative Learning

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### What Do Struggling Adolescent Readers Suffer From (Besides and Beyond Their Poor Reading Comprehension)?

- **low reading fluency** – their decoding is too slow, too inaccurate and they do not notice (enough) mistakes they make (Artelt et al., 2002; Klippner & Schabmann, 1993; Retelsdorf et al., 2012)
- **low use and awareness of adequate reading strategies** (Artelt et al., 2002; Lau, 2006; Lau & Chan, 2003; Naumann et al., 2010; Winograd, 1984)
- **low reading motivation** (Artelt et al., 2002; Butkowsky & Willows, 1980; Lau & Chan, 2003; Law, 2009; Logan et al., 2011; Naumann et al., 2010; McGeown et al., 2012)  
→ they even experience a (sharp) **decline in reading motivation during secondary school** (Archambault et al., 2010; Gottfried, 1990; Guthrie et al. 2012b; Hamilton et al., in press; Philipp, 2010; Stalder, 2013)
- **little, if any explicit instruction concerning reading strategies with teachers as models and scaffolders in their regular classrooms** (Bråten & Anmarkrud, 2012; Durkin, 1979; Hamman et al., 2000; Kleinbub, 2010)

### What Would Help Struggling (Pre)Adolescent Readers Most?

#### Concerning cognitive skills:

- direct/explicit instruction of cognitive skills like reading fluency, strategies, and comprehension (Edmonds et al., 2009; Morgan et al., 2012; Scraggs et al., Souvignier & Antoniou, 2007, 2010; Swanson, 1999, 2000; Swanson & Hoskyn, 1998; Therrien, 2004)
- repeated trainings to reinforce and automatize skills (Swanson, 1999, 2000; Therrien 2004)
- cooperative learning (Slavin et al., 2009, 2012)

#### Regarding reading motivation:

- interesting texts
- autonomy which text to choose
- clear objectives why to read something
- cooperation with others (Guthrie & Humenick, 2004)

### What ELLIPSE Is About and What We Want to Know

- ELLIPSE = «Erwerb von Lesestrategien. Längsschnittstudie zur Implementierung von Peer-Assisted Learning in der Sekundarstufe I» («Acquisition of Reading Strategies. Longitudinal Study on Implementing Peer Assisted Learning in Secondary School»)
- Intervention study within 41 classrooms (grade 6 and 7, mostly struggling readers) with a pre, post, and follow-up design with randomized groups, funded by the Swiss National Science Foundation
- Three main research question:
  1. Does our approach enhance **reading fluency, knowledge of reading strategies and text comprehension** of expository texts?
  2. Can we enhance several facets of **reading motivation**?
  3. Does the intervention lead to changes in the perception of the **reading orientation in the preadolescents' peer groups**?

### The Three Activities of the Approach (Done Three Times a Week for 12 Weeks with Role Changes in Every Single Activity)

Activity 1: Read Aloud and Retell	Activity 2: Paragraph Shrinking	Activity 3: Prediction
Retell what the text so far was about	Paragraph shrinking (at most 10 words)	Predicting the content of the next 3 parag. Monitoring whether prediction was right
Reading aloud		

\* based on the approach PALS (= Peer Assisted Learning Strategies, Fuchs et al., 2007)

### Some Principles of Our Approach That Address Motivation

- Framing story and metaphor: Reading is like climbing
- Conscious monitoring of progress by regular diagnosis of reading speed
- Fostering reading motivation through interesting expository texts about every-day-life topics with the opportunity to choose
- Three levels of texts

The Texts in the Project ELLIPSE – Two Examples

Easiest text level – blue texts  
(main idea is underlined)

"For us humans the carpet shark is dangerous because of his camouflage. Most of the accidents occur, because divers do not see the shark and carelessly approach him. Sometimes, the divers even hit the shark, and the shark jock laws. Not all of the divers have a blessing in disguise like Luke. He did not notice the fish."

Most difficult text level – black texts  
(main idea has to be constructed)

"The moon calendar was useful especially in former times. You could predict the tide. Additionally, it was important to know the current phase of the moon for huntsmen during the Stone Age. For religious purposes people needed the moon calendar, too. In the Islamic moon calendar the ninth month is Ramadan, the fasting month. For Muslims this is the most important phase of the year since a very long time."

Implicit main idea: Moon calendars are suitable for different purposes.

What Instruments Did We Use to Test the Effects of Our Approach?  
Part 1: Cognitive Reading Measures

- **reading fluency:** preadolescents read 4 minutes a texts (measure for reading speed/number or words read) and select one of three words in brackets that fits into context (cloze task, 23 brackets at all) (standardized test; LGVT 6-12) (Ennemoser, Schlägelmüller & Schneider, 2007)
- **knowledge of reading strategies:** pre adolescents judge 5 to 6 alternatives of possible approaches in five situations (38 comparisons of alternatives; also used as an abbreviated version in PISA 2009;  $\alpha = .83_{11}/.84_{12}$ ) (Neuenhaus, 2010)
- **reading comprehension:** two texts on tornados and vulcanos with 18 multiple choice questions (standardized test, FLVT 5-6;  $\alpha = .60-.74$ ) (Souvignier, Trenk-Hinterberger, Adam-Schwebe & Gold, 2008)

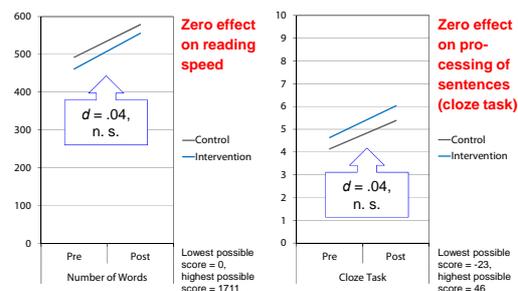
What Scales Did We Use to Test the Effects of Our Approach?  
Part 2: Motivational and Social Reading Measures

- **object-oriented intrinsic motivation (IM)** (e.g. "I read, because I like to think about certain things",  $\alpha = .69_{11}/.75_{12}$ )
- **experience-oriented IM** (e.g. "I read, because more exciting things happen in stories or novels than in real life",  $\alpha = .75_{11}/.80_{12}$ )
- **achievement-oriented extrinsic motivation (EM)** (e.g. "I read, because it helps me to improve my comprehension",  $\alpha = .76_{11}/.81_{12}$ )
- **competition-oriented EM** (e.g. "I read, because it helps me to become better than my classmates at school",  $\alpha = .79_{11}/.83_{12}$ ) (scales so far by Schaffner & Schiefele, 2007)
- **peer-oriented EM** (e.g. "I like to read texts, that my friends read, too",  $\alpha = .67_{11}/.69_{12}$ ) (Lin et al., 2012, slightly adapted)
- **reading engagement** (four teacher ratings of every student's reading behavior, e.g. "This student works hard in reading",  $\alpha = .83_{11}/.84_{12}$ ) (Wigfield et al., 2008)
- **reading orientation in the preadolescents' peer groups** (e.g. "Reading is important for my friends",  $\alpha = .69_{11}/.72_{12}$ ) (Philipp, 2010)

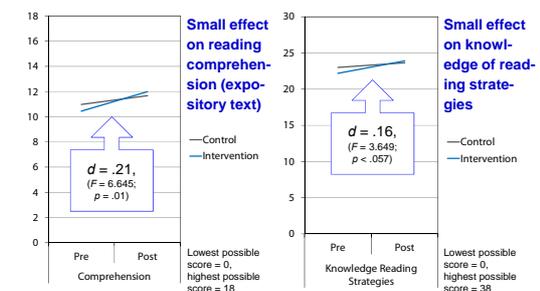
Analyses of the Data Obtained from the Adolescents

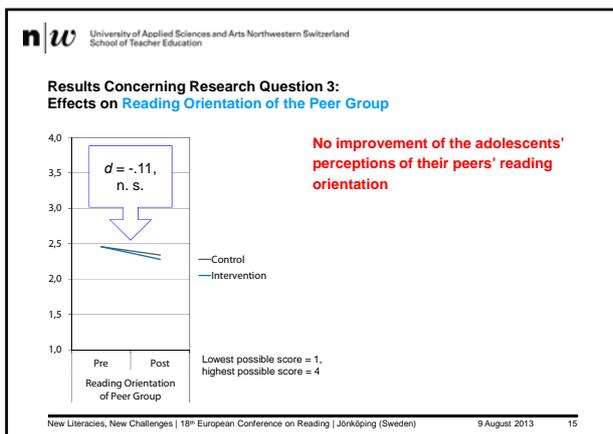
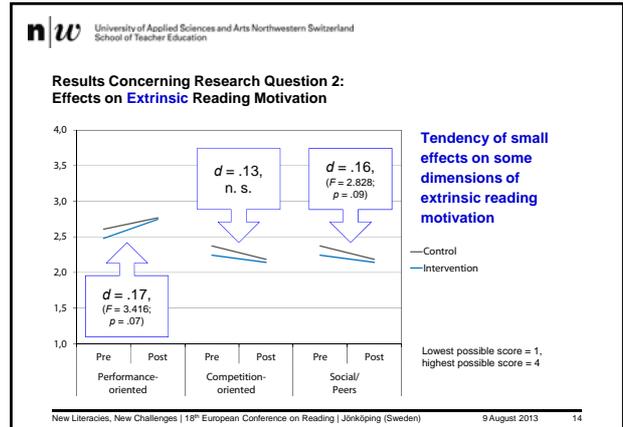
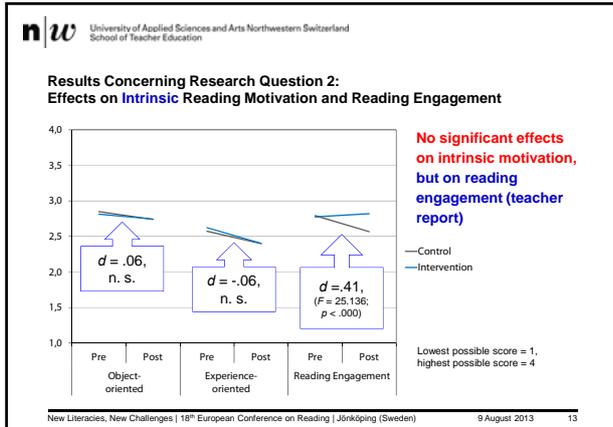
- Note: Results that are about to be reported refer to the first time of measurement (September 2012; immediately before the intervention) and the second time point (April 2013, immediately after the intervention)
- Plan of analyses
  - **Repeated-measures analyses of variance**
    - between-subject factor: experimental vs. control group
    - within-subject factor: measurement point 1 (before instruction) vs. measurement point 2 (after instruction)
  - **Reporting Cohen's d** (difference of means divided by pooled standard deviations,  $d < .20$  = small effect,  $d < .50$  moderate effect,  $d > .80$  = big effect) (Cohen, 1988)

Results Concerning Research Question 1: Effects on Cognitive Variables – Reading Speed and Basal Comprehension (Cloze Task)



Results Concerning Research Question 1: Effects on Cognitive Variables – Reading Comprehension and Knowledge of Reading Strategies





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- The Main Results at a Glance**
- **no effects on basic reading processes** (reading fluency, processing of sentences) – even though adolescents practiced for several weeks (similar results are obtained by WWC Intervention Report on PALS, 2012) (c.f. MacMaster et al., 2005)
  - **modest gains in reading comprehension and knowledge about strategies** (which has been documented by reviews from Slavin et al., 2008, 2009 – as well as from a meta-analysis on reciprocal teaching) (Rosenshine & Meister, 1994)
  - **unclear effects on motivational variables, that are based on self-reports** – which seems to be normal state in studies that address adolescents' reading motivation (Rosebrock et al., 2010; Streblov et al., 2007, 2012; Guthrie et al., 2012a)
  - **biggest gains in reading engagement (judged by teachers)** – but teachers' perceptions do not measure the same like self-reports about one's own motivation (Guthrie et al., 2007; Wigfield et al., 2008)
  - **no effects on perceptions of reading orientation in the peer group**
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**Discussion and Implications**

- Preliminary results suggest that the intervention is not equally effective in every dependent variable and needs to be improved (WWC, 2012)
- rising questions concerning on how to engage adolescents meaningfully (Katz & Assor, 2007), to develop "dedication for reading" (Guthrie et al., 2012b) and to create effective reading instruction that combines cognitive and motivational elements – maybe the standard procedures even might have bored those adolescents
- enhancing reading motivation in struggling readers as a special challenge – little research beyond about CORI (Guthrie et al., 2007; 2012a, 2013), but a plethora of recommendations
- maybe instead of following mostly scripted programs another useful attempt would be to study either outstanding teachers (Mohan et al., 2008) or to accompany teachers by a professional development approach (Duffy, 1993)

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