JURE CONFERENCE — SIG WRITING SYMPOSIUM

Assessing and Promoting the Development of Writing Skills in Primary Grades

Given the importance of writing in present-day knowledge societies, it is of the utmost importance to develop not only assessment tools that can inform about students' developmental progress in writing but also intervention programs that can boost writing development throughout schooling. This symposium will provide insight into the assessment and promotion of writing skills in primary grades. Walter, Dockrell, and Connelly will address the use of different measures to assess writing skills and to monitor students' progress. Drijbooms, Groen, Alamargot, and Verhoeven will focus on writers' strategic behaviours, such as planning, which they analysed through online methodologies combining ocular and graphomotor movements. Limpo and Alves, who tested the effectiveness of strategy-focused interventions, will strengthen Drijbooms et al.'s conclusion that writing instruction should target children's planning and self-regulation skills. Nevertheless, it is not enough to empirically prove the effectiveness of strategy-focused interventions. Teachers must believe in their effectiveness, too. Rietdijk, Janssen, Rijlaarsdam, and de Jong will discuss this kind of teachers' beliefs as well as their classroom practices. Together, these four papers will give an insightful view on how writing development can be monitored and furthered, so that one can help students to master such a powerful and indispensible tool as writing.

Paper 1 **An Examination of Writing Assessments in 9-11 year olds**
Kirsty Walter[1], Julie Dockrell[1], and Vince Connelly[2]
[1]Institute of Education, University of London, UK
[2]Oxford Brookes University, UK

Paper 2 **Developmental Factors in Narrative Composition: A Real-Time Observation**
Elise Drijbooms[1], Margriet Groen[1], Denis Alamargot[2], and Ludo Verhoeven[1]
[1]Radboud University Nijmegen, the Netherlands
[2]University of Paris-Est Créteil, France

Paper 3 **Promoting Second Graders' Writing Self-Regulation Skills in tandem with Transcription**
Teresa Limpo and Rui A. Alves
University of Porto, Portugal

Paper 4 **Dutch Primary School Teachers' Beliefs about Writing Instruction and their Classroom Practices**
Saskia Rietdijk, Tanja Janssen, Gert Rijlaarsdam, and Peter de Jong
University of Amsterdam, the Netherlands

Chair: Teresa Limpo (University of Porto, Portugal) – tlimpo@fpce.up.pt
Discussant: Stefan Heβ (University of Leipzig, Germany) – stefan.hess@uni-leipzig.de

PAPER 1

An Examination of Writing Assessments in 9-11 year olds

Kirsty Walter[1], Julie Dockrell[1], and Vince Connelly[2]
kwalter.ioephd@gmail.com

[1]Institute of Education, University of London, UK
[2]Oxford Brookes University, UK

Abstract

It is well established that mastering the complex and demanding skill of writing is fundamental to academic and vocational success (Flower & Hayes, 1980; Gansle et al, 2006). Despite its importance many children struggle to acquire adequate writing skills; for example in 2010 19% of children aged 9-11 years in the UK were identified as being weak writers (DfE, 2012). One way of aiding the development of writing in these children is regular progress monitoring, which has been found to contribute to academic growth (Fuchs et al, 1993). There are many different techniques for assessing children's writing and monitoring their progress, ranging from standardised measures, to scoring rubrics and Curriculum-Based Measures (CBM). This paper compares the reliability and validity of a standardised writing assessment with the CBM technique. It also discusses previous research exploring teachers' perceptions of these measures, and how they can be incorporated into the classroom curriculum, without unduly increasing the teachers' already heavy workload. Children aged 9-11 years from two primary schools in the UK, who had been given consent to participate in the study, completed both sets of writing tasks. The literature suggests teachers are more likely to trust the standardised measures as the format is more familiar. The results from the study demonstrate the scoring criteria from each writing assessment correlate strongly with one another, however as standardised writing assessments can only be reliably administered on a biannual basis they are less useful for closely monitoring student progress. The implications of these findings are discussed.

Extended Summary

Mastering the complex, demanding and multi-dimensional skill of writing is fundamental to academic and vocational success (Flower & Hayes, 1980; Gansle, VanDerHeyden, Noell, Resetar & Williams, 2006). In the UK a significant proportion (19%) of 9 to 11 year old children are

struggling to acquire this skill (DfE, 2012). Research has highlighted that difficulties in producing sustained, accurate, and competent writing remains a pervasive weakness for many children and can impede their educational progress, and prevent them from accessing the rest of the curriculum (Connelly, Dockrell, & Barnett, 2012). One way to help children's writing improve is to closely monitor progress through regular assessments (Fuchs, Fuchs, Hamlett, Walz & Germann, 1993). However, there is great variation across schools, and between teachers, in both the extent and way in which writing is assessed within UK primary schools. The current study therefore aims to examine two key methods of writing assessment (a standardised measure and Curriculum-Based Measures), not currently used within schools to establish their suitability for this purpose. In particular it aims to ascertain their reliability and validity, particularly in relation to accessibility, repeated administration and ability to identify weaker writers.

Two primary schools from the south of England participated in the study. Children aged 9-11 years, with the relevant consent, were asked to complete each of the tasks. Task order was counterbalanced to control for order presentation effects. Children were asked to complete each task twice to address any issues surrounding repeated administration effects. Both tasks asked children to write a timed essay in response to a prompt. All essays were then anonymised, and scored. For the standardised measure, a holistic scoring approach was taken, where essays were given a mark of 0-6. The CBM essays were scored using a variety of criteria, including correct word sequences, and words spelled correctly.

The literature suggests teachers may be more likely to trust the standardised measures as the format is more familiar to the scoring rubrics commonly implemented within the classroom context. Results were analysed using a combination of statistical techniques including correlations and ANOVAs. The results from the study demonstrate the scoring criteria from both writing assessments correlate strongly with one another; however as standardised writing assessments can only be reliably administered on a biannual basis they are less useful for closely monitoring student progress. The implications of these findings are discussed.

To conclude, monitoring children's writing progress enables early identification of struggling writers, is associated with academic growth and can help identify areas of specific weakness for targeted interventions. Furthermore, there are a number of assessment tools available to teachers which can assist them in this venture. Standardised measures are quicker to score, however they are more prone to bias due to their subjective nature. Conversely, CBM tasks enable objectivity and can be administered more frequently than their standardised counterparts.

References

Connelly, V., Dockrell, J. E., & Barnett, A. L. (2012). Children Challenged by Writing Due to Language and Motor Difficulties. In V. Berninger (Ed.), *Cognitive Psychology of Writing Handbook: Past, Present, and Future Contributions of Cognitive Writing Research to Cognitive Psychology*. Hove, UK: Psychology Press

DfE. (2012). *Statistical First Release: National Curriculum Assessments at Key Stage 2 in England, 2012 (Provisional)*. London: Department for Education.

Flower, L., & Hayes, J. R. (1980). The dynamics of composing: Making plans and juggling constraints. In L. W. Gregg & E. R. Steinberg (Eds.), *Cognitive Proceses in Writing* (pp. 31-50). Hillsdale, Nj: Erlbaum.

Fuchs, L. S., Fuchs, D., Hamlett, C. L., Walz, L., & Germann, G. (1993) Formtaive Evaluation of academic Progress – How mucu growth can we expect. *School Psychology Review, 22*(1), 27-48.

Gansle, K. A., VanDerHeyden, A. M., Noell, G. H., Resetar, J. L., & Williams, K. L. (2006) The technical adequacy of curriculum-based and rating-based measures of written expression for elementary school students. *School Psychology Review*, *35*(3), 435-450.

PAPER 2

Developmental Factors in Narrative Composition: A Real-Time Observation

Elise Drijbooms[1], Margriet Groen[1], Denis Alamargot[2], and Ludo Verhoeven[1]
e.drijbooms@pwo.ru.nl

[1]Radboud University Nijmegen, the Netherlands
[2]University of Paris-Est Créteil, France

Abstract

The aim of the current study was to enhance our understanding of the writing strategies used by novice and expert writers during narrative composition from a visual source of images. More specifically, the study compared to what extent novice and expert writers build the macrostructure of the story prior or during composition and how this affects the time course of the writing process. The study adopted an approach using a real-time observation of writing activity to shed more light on these issues. Participants included 38 university students and 35 children in fifth grade. They were asked to compose a story on a digitizing tablet from a series of images depicting a narrative. During composition, their eye and graphomotor movements were recorded. The results, as evidenced by temporal and ocular characteristics, suggest that adults construct the macrostructure prior to writing, whereas children do so during composition. The textual analysis suggests that this difference in writing strategies affects the quality of the textual macrostructure. Educational implications could involve explicit strategy instruction as well as instruction in knowledge of narrative structure.

Extended Summary

Aims. Writing is a complex task and a critical element of its development is the acquisition of effective writing strategies. Children's writing strategies have frequently been characterized as knowledge-telling as opposed to adults' knowledge-transforming strategies (Bereiter & Scardamalia, 1987). Most research on early writing strategies has focused on expository writing and has collected verbal protocols to account for differences in the writing process of novice and expert writers. Recently, however, research has made great progress in the development of tools and devices to assess and describe online writing processes. The synchronous recording of handwriting and eye movements, for instance, has proven to possess great potential for capturing the dynamics

of writing within a task environment (Alamargot, Chesnet, Dansac, & Ros, 2006). The aim of the current study was therefore to replicate and broaden previous studies regarding the different strategies used by novice and expert writers during narrative composition from a visual source of images, by observing the writing process in real time using temporal and ocular characteristics. More specifically, this study aimed to understand how novice and expert writers build the macrostructure of the story, link the macrostructure to knowledge of story structure in long-term memory and fit the main events of the story into this macrostructure. These skills are all relevant to successful narrative composition.

Methodology. Participants consisted of 38 university students and 35 children in fifth grade. Participants were asked to write a story from a series of eight images depicting a narrative. During the composition, eye and pen movements were recorded by means of the Eye & Pen software (Alamargot, Chesnet, Dansac, & Ros, 2006). Participants wrote on a digitizing tablet, while their eye movements were recorded by an Eyelink II head-mounted eye-tracker. Process measures concerned temporal and ocular characteristics including prewriting and composition duration, compositional fluency, transitions from text to source, transitions between images, fixation frequency and fixation duration. Product measures resulted from an analysis of the textual macrostructure in terms of quality of story structure, number of main events and use and diversity of clause-linking devices.

Results. Adults consulted the source intensively during prewriting as evidenced by the longer prewriting pause, the longer duration of fixations on the images and the higher number of transitions between images during prewriting. By contrast, they did so less intensively during composition. The textual analysis showed that their stories had a rich macrostructure. The inverse pattern was found for children. Children consulted the source superficially during prewriting, but frequently during composition as evidenced by frequent transitions from text to source during composition, and more and longer fixations on images during such a transition. However, during a transition from text to source, children tended to consult only one image at once. Compared to adults' texts, children's stories possessed a rather poor macrostructure.

Discussion. The findings suggest that adults employ advanced macroprocessing strategies, and construct the macrostructure of the story prior to writing. As the macrostructure is build prior to writing, more attention can be directed towards the textual elaboration of the macrostructure. Children, by contrast, lack self-regulation skills and typically show little planning behavior prior to writing. This writing strategy forces them to construct the macrostructure during composition, where it competes with other non-automated writing processes such as transcription and language

generation. In order to avoid a cognitive overload, the writing processes are sequentialized, constraining the overall textual quality in terms of macrostructure.

Conclusion. The current study confirms that a developmental model of written production should describe both the characteristics of the written product as well as the online course of the writing process. More specifically, the combined analysis of temporal and ocular characteristics enables researchers to highlight writing strategies used by novice and expert writers. Educational implications could involve explicit strategy instruction, even in simple writing tasks such as narratives to increase awareness of the importance of self-regulation strategies such as planning. Additionally, explicit instruction in narrative structure might strengthen knowledge of narratives in long-term memory, rendering this knowledge more available for use during composition.

References

Bereiter, C., & Scardamalia, M. (1987). *The psychology of written composition*. Hillsdale, NJ: Erlbaum.

Alamargot, D., Chesnet, D., Dansac, C., & Ros, C. (2006). Eye and Pen: a new device to study reading during writing. *Behavior Research Methods, 38(2)*, 287-299.

PAPER 3

Promoting Second Graders' Writing Self-Regulation Skills in tandem with Transcription

Teresa Limpo and Rui A. Alves

tlimpo@fpce.up.pt

University of Porto, Portugal

Abstract

The acquisition of high-level cognitive skills for self-regulation needed for effective writing seems to be dependent upon the automatization of transcription (Limpo & Alves, 2013). This study analyzed the effectiveness of a writing intervention aimed to promote self-regulation and transcription (handwriting and spelling) in second graders' (age 7-8). A group of 43 students receiving instruction in self-regulation plus transcription was compared with another intervention group receiving instruction in self-regulation only (n = 37), and with a practice control group receiving standard writing instruction (n = 42). After 10 weeks of instruction, we found that both intervention groups wrote more complex plans, as well as more complete and better stories than the control group. Furthermore, they included more story elements in a written recall than the control group. Critical differences were found between the self-regulation plus transcription group and the other two groups. Compared to their peers, students receiving the combined intervention displayed higher handwriting fluency in the alphabet and copy tasks, correctly spelled more inconsistent words in a dictation task, produced stories using longer bursts (i.e., number of words in-between two pauses longer than 2 s), and wrote syntactically more complex sentences. It is also noteworthy, that despite both intervention groups surpassed the control group on stories completeness, the self-regulation plus transcription group also wrote more complete stories than the self-regulation only group. This pattern of findings suggests that, in very young children, the beneficial effects of self-regulation interventions can be potentiated if combined with instruction in transcription.

Extended Summary

Aims. According to the simple view of writing, text generation is supported by the collaboration between transcription (handwriting and spelling) and high-level cognitive skills for self-regulation, such as planning and revising (Berninger & Winn, 2006). As transcription and self-regulation impose heavy demands on the limited capacity of working memory, these processes must

be efficiently juggled to manage cognitive load (McCutchen, 1996). While expert writers seem to display this coordination, young writers do not. Children's transcription processes are so costly that they seem to constrain the development and successful employment of self-regulation ones (Limpo & Alves, 2013). Thus, it is likely that, from very early on, children may benefit from comprehensive writing intervention programs that tap on these two processes. In the present study, we tested the effectiveness of a writing intervention aimed to promote second graders' self-regulation jointly with transcription.

Method. Participants were 122 Portuguese native speakers in Grade 2 (6 classes), with a mean age of 7.3 years (*SD* = 0.5; 69 girls). This study involved a quasi-experimental pretest-posttest design with two intervention groups. One group received instruction in self-regulation plus transcription (*n* = 43) and the other group received instruction in self-regulation only (*n* = 37). These two groups were compared with a control group (*n* = 42). Both intervention groups received the same self-regulation program, which comprised 10 60-min weekly sessions and followed the Self-Regulated Strategy Development model (Harris & Graham, 2009). Students were taught a strategy to plan stories in tandem with self-regulation procedures (viz., goal setting, self-monitoring, and self-instructions). The planning strategy facilitated the generation of content and the creation of an organized structure for their compositions. The self-regulation procedures helped them to manage their behaviour during writing. In one of the groups, this self-regulation program was coupled with a transcription program, which comprised 10 weekly units composed by 3 20-min training sessions (two sessions occurred in the classroom, and one session was implemented as homework). Transcription instruction was aimed at promoting fast and accurate handwriting and spelling. In the control condition, students followed the ordinary curriculum and wrote the same number of stories as the two intervention groups.

Before and after instruction students were asked to plan (5 min) and write (10 min) a story using *HandSpy*. This is a web-based application for recording and analyzing online handwriting data, which uses apparently normal pens and paper sheets. Moreover, they did the alphabet and copy tasks, spelled a set of dictated words trained in the transcription program, and produce a written recall of an orally presented story. We measured program-specific skills (planning and transcription), online text production (bursts and pauses), overall writing quality, language at the discourse (story completeness), sentence (clause length), and word (vocabulary diversity) levels, and completeness of the written recall.

Results. Treatments' effects were tested with analyses of covariance, in which the pretest score of each variable was covaried. No effects were found for average pause duration and vocabulary diversity. Nevertheless, we found that both intervention groups wrote more complex

plans, as well as more complete and better stories than the control group. Furthermore, they included more story elements in the written recall than the control group. Critical differences were found between the self-regulation plus transcription group and the other two groups. Compared to their peers, students receiving the combined intervention displayed higher handwriting fluency, correctly spelled more inconsistent words in the dictation task, produced stories using longer bursts (i.e., number of words written in-between two pauses longer than 2 s), and wrote syntactically more complex sentences. It is also noteworthy that, despite both interventions groups surpassed the control group in stories completeness, the self-regulation plus transcription group also wrote more complete stories than the self-regulation only group.

Conclusions. These results are in line with extant research showing that promoting students' self-regulation skills is an effective way to foster writing (Harris & Graham, 2009). Furthermore, this pattern of findings suggests that, in very young children, the beneficial effects of self-regulation interventions can be potentiated if combined with instruction in transcription. This supports our initial claim that, as children struggle with transcription and self-regulation during the initial years of learning to write, to promote their ability to write proficiently in a comprehensive way, transcription and self-regulation instruction should be integrated within a single writing program.

References

Berninger, V. W., & Winn, W. (2006). Implications of advancements in brain research and technology for writing development, writing instruction, and educational evolution. In C. A. MacArthur, S. Graham & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 96-114). New York, NY: Guilford Press.

Harris, K. R., & Graham, S. (2009). Self-regulated strategy development in writing: Premises, evolution, and the future. *British Journal of Educational Psychology Monograph Series, II*(6), 113-135. doi: 10.1348/978185409X422542

Limpo, T., & Alves, R. A. (2013). Modeling writing development: Contribution of transcription and self-regulation to Portuguese students' text generation quality. *Journal of Educational Psychology, 105*, 401-413. doi: 10.1037/a0031391

McCutchen, D. (1996). A capacity theory of writing: Working memory in composition. *Educational Psychological Review, 8*, 299-325. doi: 10.1007/BF01464076

PAPER 4

Dutch Primary School Teachers' Beliefs about Writing Instruction and their Classroom Practices

Saskia Rietdijk, Tanja Janssen, Gert Rijlaarsdam, and Peter de Jong
s.rietdijk@uva.nl

University of Amsterdam, the Netherlands

Abstract

This study is part of an intervention study in Dutch primary schools. The effects are studied by following 50 teachers and their pupils for two years. We report on the outcomes of a pre-test. Research questions are: What are teachers' beliefs about the teaching of writing? How do teachers teach writing? Are writing beliefs and practices related? The participants all used the same reading comprehension programme and volunteered to participate. A questionnaire was distributed to infer teachers' beliefs about writing instruction. We gathered information on teachers' self-reported classroom practices through a questionnaire and an interview. Classroom observations were carried out. Data-analyses were both quantitative and qualitative. The results show that the teachers find strategy instruction important, but they hardly teach strategies. The teachers do not consider correct writing to be of great importance. In practice, however, they lay much emphasis on aspects of correct writing. There seems to be no conflict between the beliefs of the teachers and the ingredients of the strategy oriented writing programme we want to implement. There is a gap between primary school teachers' beliefs and their actual practices in teaching writing. There seems to be an urgent need for concrete writing strategies lesson materials and teacher training in writing strategy instruction. The teaching of writing needs to be improved, because desired activities often do not take place. The self-reported and observed practices in our study correspond highly, which indicates that the teacher interview was a reliable instrument to gain insight into teachers' writing classroom practices.

Extended Summary

Context and aim. This study is part of an ongoing longitudinal intervention study in primary schools in the Netherlands. The aim of the intervention is to contribute to the improvement of

writing education in grades 4 to 6. The intervention consists of strategy-oriented writing lessons and a training for teachers. Effects are studied by following 50 teachers and their pupils for two years. The current sub study reports on the outcomes of a pre-test among the participating teachers. Research questions are: What are primary school teachers' beliefs about the teaching of writing? How do primary school teachers teach writing? To what extent are writing beliefs and writing practices related? Is there a conflict between the beliefs and/or practices of teachers and the ingredients of the strategy oriented writing programme we want to implement?

Theoretical and educational relevance. There are several motives for this research project. First of all, according to a report of the Dutch Inspectorate in 2010, writing education in the Netherlands is of low quality. Research also shows that the writing level of Dutch pupils at the end of primary school is insufficient (Kuhlemeier et al., 2013). Teachers indicate that they find writing difficult to teach, particularly the assessment of students' texts is problematic. At the same time ingredients for effective writing lessons are available from educational research. Several meta-analyses found that strategy instruction is highly effective (Graham & Perin, 2007; Graham, McKeown, Kiuhara, Harris, 2012; Rogers & Graham, 2008) for example. In order to determine whether the intervention we design and implement is effective and what problems might occur during the implementation, it is important to find out what teachers' current beliefs about writing instruction are and how they are currently teaching writing.

Method. The participants were fifty primary school teachers. They all used the same online reading comprehension programme ('Nieuwsbegrip'), in which the writing strategy programme will be inserted. They all volunteered to participate. The youngest participant was 23 years old, the eldest 63 years. Their mean age was 43 years (SD = 11.90). The teaching experience they had varied between 2 and 39 years, with a mean of 16 years (SD = 10.90). The data was collected by ten student assistants, who visited the schools between May and November 2013. We used several instruments to measure teachers' beliefs and their classroom practices. A questionnaire (based on Graham, Harris, MacArthur & Fink, 2002) was distributed to infer teachers' beliefs about writing instruction. We gathered information on teachers' self-reported classroom practices through a questionnaire and an interview. Classroom observations were carried out in writing lessons. Observers scored whether eight students were on or off task, by watching them one by one. Afterwards the observers were asked to assess various features of the observed writing lessons in a questionnaire. Data-analyses were both quantitative and qualitative.

Findings. The results show that the teachers find strategy instruction important, but at the same time they hardly teach strategies. The teachers do not consider correct writing to be of great importance. In practice, however, they lay much emphasis on aspects of correct writing, such as

spelling, correct sentences and correct punctuation. There seems to be no conflict between the beliefs of the teachers and the ingredients of the strategy oriented writing programme we want to implement. Teachers recognize the importance of teaching writing strategies, modelling and cooperation of students in writing lessons. As yet, the current practice of teachers and the practice we desire does not converge. There are correspondences though, 41% of the teachers has been observed to model the writing process, for example.

Conclusions. We conclude that there is a gap between primary school teachers' beliefs and their actual practices in teaching writing. There seems to be an urgent need for concrete writing strategies lesson materials and teacher training in writing strategy instruction. The teaching of writing needs to be improved, because desired activities often do not take place. The self-reported and observed practices in our study correspond highly, which indicates that the teacher interview was a reliable instrument to gain insight into teachers' writing classroom practices. It seems teachers were honest about the way they teach writing.

References

Graham, S., Harris, K. R., MacArthur, C. A., & Fink, B. (2002). Primary grade teachers' theoretical orientations concerning writing instruction: Construct validation and a nationwide survey. *Contemporary Educational Psychology, 27*, 147-166

Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, *99*, 445-476.

Graham, S., McKeown, D., Kiuhara, S. & Harris, K.R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology*, *104*(4), 879-896.

Inspectie van het Onderwijs (2010). *Het onderwijs in het schrijven van teksten. De kwaliteit van het schrijfonderwijs in het basisonderwijs*. [Teaching writing. The quality of writing education in primary schools]. Utrecht: Inspectie van het Onderwijs.

Kuhlemeier, H., Til, A. van, Hemker, B., Klijn, W. de, & Feenstra, H. (2013). Balans van de schrijfvaardigheid in het basis en speciaal onderwijs 2. [Evaluation of writing skills in primary education and special education]. Arnhem: Cito.

Rogers, L., & Graham, S. (2008). A meta-analysis of single subject design writing intervention research. *Journal of Educational Psychology*, *100*, 879–906.