

# SIG Writing Porto 2012



## Program & Abstracts

13<sup>th</sup> International Conference of the EARLI  
Special Interest Group on Writing

University of Porto

# **SIG Writing Porto 2012**

**13<sup>th</sup> International Conference of the EARLI  
Special Interest Group on Writing**

## **Program & Abstracts**

**July 11 – 13, 2012  
University of Porto**



## **Welcome to the SIG Writing Porto 2012!**

The Porto writing research team feels deeply honored of hosting the 13<sup>th</sup> International Conference of the EARLI SIG Writing. We began the preparation for this conference two years ago, and now that everything is ready, we are confident that in the next three days, you will have a much pleasant conference. Not only because of sunny Porto, but especially because of the stimulating intellectual atmosphere that a great scientific program will ignite.

You are sure to navigate your own way in a very rich program of symposia, papers, and posters, but let us also draw your attention to the plenary moments of the conference. The keynote speaker at Porto is Dick Hayes, arguably one of the most influential writing researchers of all time. Hayes will be presenting “Modeling and Remodeling Writing”. As another sign of appreciation for his outstanding contributions, we have paired with Written Communication to publish, coincidentally with this conference, a special issue in his honor.

Starting in Porto a second plenary lecture is being added to the SIG Writing Conference program, the Hayes lecture. The first Hayes lecture will be delivered by Ronald Kellogg, a leading researcher in the study of working memory in writing, and the current recipient of the Hayes award.

Writing is becoming more and more a hot topic for interdisciplinary research. A sign of this is a steady increase in the number of peer-reviewed papers in mainstream journals and a considerable number of writing handbooks recently published. Editors play a crucial role in this surge and they are sure to have strong opinions on what deserves to be published, or not. In this conference you are invited to join in a roundtable with the Editors of four writing leading journals.

In Porto you can meet about 200 writing researchers arriving from 29 countries. Most of these writing researchers are long-standing contributors to writing research and their views are sure to enrich the piece of research that you brought for discussion. Furthermore, SIG Writing is the perfect place to inspire your next writing research and to meet the colleagues that will collaboratively improve it. So take this time to engage in lively exchanges. Enjoy the Conference!

During the next three days, you will be in the epicenter of writing research. You are most welcomed!

The Organizing Team



## Contents

<b>Conference Committees .....</b>	<b>7</b>
<b>Practical Information.....</b>	<b>9</b>
<b>About SIG Writing .....</b>	<b>14</b>
<b>Social Program .....</b>	<b>17</b>
<b>Program Overview .....</b>	<b>19</b>
<b>Detailed Program .....</b>	<b>21</b>
<b>Abstracts .....</b>	<b>33</b>
Wednesday, July 11 .....	35
Wednesday, Opening Ceremony .....	37
Wednesday, 11:00 – 13:00 .....	39
Wednesday, 14:00 – 16:00 .....	56
Wednesday, 16:30 – 18:00 .....	73
Wednesday, Editors’ Roundtable .....	83
Wednesday, Writers’ Dinner & Roundtable .....	84
Thursday, July 12 .....	85
Thursday, 9:00 – 10:30 .....	87
Thursday, 11:00 – 13:00 .....	99
Thursday, 14:00 – 16:00 .....	116
Thursday, Poster Session I .....	133
Thursday, Keynote Lecture .....	147
Friday, July 13 .....	151
Friday, 9:00 – 10:30 .....	153
Friday, 11:00 – 13:00 .....	165
Friday, 14:00 – 16:00 .....	182
Friday, Poster Session II .....	199
Friday, J. Hayes Lecture .....	213
Pre-Conference Workshops .....	217
<b>Index of Authors.....</b>	<b>223</b>
<b>Maps .....</b>	<b>227</b>



## Conference Committees

### Scientific Committee

Denis Alamargot, University of Poitiers, CNRS  
Barbara Arfé, University of Padua  
Montserrat Castelló Badia, Ramon Llull University  
Charles Bazerman, University of California  
Virginia Berninger, University of Washington  
Pietro Boscolo, University of Padova  
Vince Connelly, Oxford Brookes University  
Julie Dockrell, University of London  
Michel Fayol, Blaise Pascal University, CNRS  
David Galbraith, Staffordshire University  
Joachim Grabowski, University of Hanover  
Steve Graham, Vanderbilt University  
Ronald Kellogg, Saint Louis University  
Margarida Alves Martins, Higher Institute for Applied Psychology  
Deborah McCutchen, University of Washington  
Kristyan Spelman Miller, University of Winchester  
Debra Myhill, University of Exeter  
Guido Nottbusch, University of Potsdam  
Thierry Olive, University of Poitiers, CNRS  
Gert Rijlaarsdam, University of Amsterdam  
Liliana Tolchinsky, University of Barcelona  
Mark Torrance, Nottingham Trent University  
Luuk Van Waes, University of Antwerp  
Åsa Wengelin, University of Gothenburg

### Organizing Committee

Rui A. Alves  
São Luís Castro  
Teresa Limpo  
Selene Vicente



## Conference Committees

### Program Committee

Rui A. Alves, University of Porto  
José Brandão Carvalho, University of Minho  
Luísa Álvares Pereira, University of Aveiro  
Barbara Arfé, University of Padua  
David Galbraith, Staffordshire University  
Thierry Olive, University of Poitiers, CNRS  
Mark Torrance, Nottingham Trent University

### Staff

Ana Camacho	Ilda de Jesus
Ana Catarina Silva	Joana Barcelos Alves
Ana Rita Vaz	Joana Esteves
Andreia Nunes	Marcos Dias
Bárbara Coelho	Marisa Filipe
Bárbara Fonseca	Marta Miranda
Carolina Guedes	Nuno Patraquim
Catarina Gomes	Nuno Sousa
Céu Teixeira	Priscila Rodrigues
Diana Sousa	Sara Costa
Diogo Pereira	Soraia Teles
Diva Couto	Telma Miranda
Fanny Lima	

## Practical Information

### FPCEUP

The SIG Writing 2012 Conference is held at the Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto (FPCEUP). FPCEUP is one of the 14 faculties of the University of Porto, which is currently the largest higher education and research institution in Portugal. Covering a large range of study areas in Psychology and Educational Sciences, FPCEUP is one of the most sought after faculties in Portugal. In the course of its 25 years of activity, FPCEUP has always positioned itself as seeking excellence and deeply committed to guarantee high-standards in education, research, and social services.

### Registration & Information Desk

The registration and information desk is located at the Entrance Lobby<sup>\*</sup>. It will be open during all conference days from 8:30 to 18:00. In an urgent situation you can also reach the information desk or a person of the Organizing Team via the emergency phone: +351 963 637 001 (Marisa Filipe).

### Presentations

During the three days of the Conference there will be four parallel sessions composed of individual papers and symposia. Posters will be presented in two plenary sessions on Thursday and Friday afternoons.

**Individual Papers** are thematically grouped in sessions of three or four papers that last one hour and a half or two hours, respectively. A chairperson will moderate each session and assure that it follows the program timetable. Within each session, every presentation should strictly conform to the following format: 20 min presentation plus 10 min for discussion and for switching among parallel sessions.

**Symposia** include four individual papers and will last two hours with every speaker being allotted 20 min. After all presentations, the discussant will also have 20 min to

---

<sup>\*</sup> See FPCEUP maps at the end of this book.

## Practical Information

discuss the presented contributions. The remainder 20 min can be used for discussion with the audience, which will be moderated by the chairperson.

**Posters** are thematically grouped in three or four contributions with every first author giving a 5 min presentation followed by a 3 min discussion by the audience and an assigned discussant.

### Presentations' Technical Facilities

**Oral Communications' Presenters** are recommended to use the computer available in each lecture room to make their presentations. This computer is connected to a projector and loudspeakers. Also, it has installed Microsoft Office programmes, PDF, and VLC media players. Presenters are asked to upload their presentation from a USB stick during the pause right before the session in which their paper is scheduled. Members of the Organizing Team will be present in all lecture rooms to help speakers with this procedure. Although less recommended, presenters can directly connect their laptop to the projection device. In this case, please notify the Organizing Team and the chair of the session as soon as you can.

**Posters' Presenters** are requested to stick the posters in the Auditorium Foyer\* during the morning of the scheduled poster session. Members of the organizing team will provide materials and help presenters to stick their posters on the assigned location. Every poster was assigned a presentation number.

### Plenary Sessions

**The Opening Ceremony** of the SIG Writing Porto 2012 will mark the beginning of three full working days of alternating high-quality presentations and relaxing breaks. It will take place at the Main Auditorium\* at 10:00 in the first day of Conference. Local authorities will welcome writing researchers from all over the world and a musical moment will follow, inspiring everybody to enter into the spirit of another great SIG Writing Conference!

## Practical Information

**The Editors' Round Table** will take place on Wednesday at 18:00. It will gather the four Editors of *Research Papers in Education*, *Cultura y Educacion*, *Journal of Writing Research*, and *Reading & Writing*, together they will discuss the prospects of writing research publication.

**The Keynote Lecture** will be offered by John R. Hayes on Thursday afternoon. For almost 40 years, Hayes has been applying methods and theoretical concepts from cognitive psychology to the field of writing. The cognitive process view of writing that he helped champion stands as a lynchpin in our theoretical understanding of writing, and this process view continues to have a profound impact on writing research and instruction.

**The John Hayes Lecture** is starting at Porto and, at each new SIG Writing Conference, it will be given by the recipient of the John Hayes award. We are delighted that Ronald T. Kellogg accepted to deliver the first Hayes lecture, which will take place on Friday afternoon.

**The John R. Hayes Award for Excellence in Writing Research** is aimed at recognizing outstanding empirical research in writing. It is awarded biennially to the best article published in the *Journal of Writing Research* (JoWR). In 2012, this paper was selected from a shortlist of nominated papers published in JoWR, during 2010-2012, by a committee appointed and chaired by representatives of the JoWR editorial team (G. Rijlaarsdam, M. Torrance, and L. van Waes. Articles were evaluated for quality of empirical scholarship and for their contribution to understanding of written production. Winners will be recognized in the closing session of this conference. Recipients of the award will receive a custom-designed commemorative object and a \$1000 prize, which is generously funded by John R. Hayes.

**The SIG Writing Business Meeting** will take place on Thursday at 17:30 (Room 250\*). All enrolled members of the EARLI SIG Writing as well as non-members interested in SIG Writing activities are invited to participate in it. At the meeting, the SIG coordinators will inform about relevant issues related to writing research and the SIG Writing community. For instance, development of SIG Writing activities, publication policy, representation of writing research at the forthcoming 2013 EARLI Conference in Munich, and decision on the next SIG Writing Conference, in 2014.

## Practical Information

### Computer Facilities

**Wireless Network** is accessible in the whole building for participants who want to access Internet from their laptops. To configure the access to the Eduroam wireless network please download the required software at [http://www.fpce.up.pt/wireless\\_eduroam/wireless\\_eduroam\\_eng/index.htm](http://www.fpce.up.pt/wireless_eduroam/wireless_eduroam_eng/index.htm)

Username: eventos@fpce.up.pt

Password: Si2012

**A Computers Room (Room 103<sup>\*</sup>)** is also accessible for attendants who did not bring their laptops. Computers are equipped with Microsoft Office applications as well as Internet access. This room is located at the first floor and can be used during the all week (from the 9<sup>th</sup> to the 13<sup>th</sup> of July).

Username: sigwriting

Password: 2012

### Food & Drink

Coffee breaks and lunch during the three conference days will be offered to those attendees carrying a conference badge. Be sure not to forget yours.

**Coffee Breaks** will take place in the Auditorium Foyer<sup>\*</sup> at 10:30 and 16:00. Thursday and Friday afternoon coffee breaks will be served concurrently with the two poster sessions.

**Lunch** will take place in the Entrance Garden<sup>\*</sup> at 13:00. A cold buffet lunch consisting of several dishes will be served. For those who want to eat a snack or have a coffee behind schedule, there is a cafeteria and a coffee machine at the lower floor of the building and some restaurants in the area<sup>\*</sup>.

## Practical Information

### Lecture rooms<sup>\*</sup>

**Rooms 250, 249, 247, and 246** are located in the upper floor and will be the home for the four parallel sessions. They are close by to easy switching between talks.

**The Main Auditorium**, which is located near the Entrance Lobby<sup>\*</sup>, will receive the plenary sessions (opening, keynotes, and closing events).

### Pre-Conference Workshops

Before the start of the conference, on Tuesday afternoon, three workshops are offered. These workshops are focused on the latest developments in writing logging tools.

---

<sup>\*</sup> See FPCEUP maps at the end of this book.

## **About SIG Writing**

### **A Special Interest Group on Writing**

SIG Writing is a special interest group of the European Association for Research on Learning and Instruction (EARLI), it was initiated in 1988 by Michel Fayol and Pietro Boscolo. Twenty-four years later, it has grown to a worldwide network of about 120 hardcore members that actively foster writing research. The number of writing researchers connected through SIG Writing activities is even far-reaching. SIG Writing provides a forum for the exchange of ideas and promotes research collaboration between writing researchers from different countries, as well as from different disciplines, such as education, psychology, linguistics, cognitive science, computer science, literary studies, and rhetoric. Examples of topics dealt within are: the cognitive, social and developmental processes involved in writing, the functions of writing in different social and institutional context, and the design of writing instruction in various educational settings.

### **SIG Writing Coordinators**

According to EARLI standing orders, there are two coordinators for each SIG who hold four-year terms and who shall come from countries reflecting the variety of its members' origins inside and outside of Europe. Currently, coordinators are Barbara Arfé (University of Padova, Italy) and Rui A. Alves (University of Porto, Portugal).

### **Activities: Conferences & Publications**

SIG Writing is an international, cheerful, and very active group. Two of the most important and influential activities of SIG Writing are the organization of the SIG Writing Conferences and fostering communication among writing researchers by means of scientific publications.

**SIG Writing conferences**, which are organized biennially, are aimed at promoting interdisciplinary exchanges among researchers from several fields. Our first Conference took place at the University of Padova in 1988. Since then, 11 more have successfully been organized by writing research teams across Europe.

## About SIG Writing

**Publications** on topics related to the scientific study of writing include: the prepublication and archive server, the book series *Studies in Writing*, and the online journal *Journal of Writing Research*.

### Becoming a member

To join SIG Writing you have first to join EARLI, and choose to become a member of the SIG Writing. Membership in EARLI costs 95€ per year (for students 35€), with an additional fee of 8€ for each SIG chosen. The fee includes a subscription to EARLI's journal *Learning and Instruction*. We strongly encourage all researchers and students who participate in the SIG Writing's activities to apply for membership!

### Dr. Joshi Travel Grants

The future of a Society owes as much to its permanent and active members as to the new bright members that it is able to attract and nurture. To this end, we started at Porto a PhD travel grants program that provides funding for PhD students presenting at the SIG Writing Conference. In honor of one of our most travelled members we named this Dr. Joshi travel grants. Grantees will play a key role in the SIG Writing Conference. Besides presenting their research discoveries they were assigned as discussants to the Poster Sessions. In 2012, the SIG Writing members benefiting from the Dr. Joshi Travel Grants are: Elise Drijbooms (Radboudh University Nijmegen), Kirsty Walter (Oxford Brookes University), María Sol Iparraguirre (Buenos Aires University), Michael Fartoukh (Nice University), Nayme Salas (Barcelona University), and Solen Sausset (Poitiers University)

*"Dr. Joshi, "the literacy globe trotter", has inspired many researchers and students to investigate writing as well as reading. [...] He is a pioneer who advanced scientific knowledge and also promoted others in their efforts to do so. Naming the travel grants for him is a well deserved honor."*

Virginia W. Berninger



## About SIG Writing

To find out more information about...

**SIG Writing** go to <http://www.sig-writing.org/>

**EARLI** go to <http://www.earli.org/home>

**Membership** go to <http://www.earli.org/membership>

**Journal of Writing Research** go to <http://www.jowr.org/>

**Publication Archive** go to <http://www.sigwritingpublications.org>

## **Social Program**

### **Warm-up Meeting, July 10 (18:00)**

Come get ready to attend to the Conference, meet your friends, and take a moment to know the Conference venue. If you arrive early on you can also attend to one of the pre-conference workshops. Then, have a chat, a drink, and a snack.

### **Port of Honour Reception, July 11 (18:45)**

To close the first day of Conference, you are invited to have a taste of Porto Wine at the Registration Lobby\*.

### **Writers' Dinner & Roundtable, July 11 (20:30)**

You are most welcomed to have a gourmet dinner in one of Porto's most emblematic café, Guarany. The dinner will be followed by a roundtable with four Portuguese writers, which will talk about their own writing process and will comment on the topic of writing and imagination.

### **BUS Tour Sightseeing, July 12 (18:45)**

You are invited to take the Historical Porto tour, which will end at the Conference dinner place. The meeting point is at the Entrance Garden of FPCEUP at 18:45. During the tour you will see: Lapa – Praça da República – Rotunda da Boavista - Casa da Música – Palácio de Cristal – Museu Nacional Soares dos Reis – Torre dos Clérigos – Avenida dos Aliados (5 min stop) – S. Bento – Mercado Ferreira Borges – Palácio da Bolsa – Ponte D. Luis I – Av. Gustavo Eiffel – Pousada do Porto, Palácio do Freixo. If you do not mind missing some of these Porto sights, at 19:30 the buses will stop 5 min at Avenida dos Aliados (on the right hand side facing Hotel Intercontinental, at the Yellow Bus kiosk) to collect the remainder dinner guests.

## **Social Program**

### **Conference Dinner, July 12 (20:00)**

The Conference Dinner will take place in Pousada do Porto – Palácio do Freixo, which is one of the most remarkable monuments of the Portuguese civil baroque, and was classified as national monument in 1910. On reception you will be offered a welcome drink at the sound of *Rooftop Joe*. Later, the dinner will be served at Douro room, which offers a magnificent view over the river. The magnificence of the Palace, the river view, and the regional gastronomy all combined with cheerful colleagues will offer you a memorable dinner!

### **Closing Event, July 13 (17:30)**

The Conference will end with a live performance of *Atituna*, the feminine tuna of the Psychology and Educational Sciences Faculty, University of Porto.

## Program Overview

Wednesday 11 (p35 – blue)		Thursday 12 (p85 – green)	Friday 13 (p151 – pink)
9:00	Registration & Coffee	Individual Papers	Individual Papers
10:00	Opening Ceremony	Coffee Break	Coffee Break
11:00	Individual Papers & Symposium	Individual Papers & Symposium	Individual Papers & Symposium
13:00	Lunch	Lunch	Lunch
14:00	Individual Papers & Symposium	Individual Papers & Symposium	Individual Papers & Symposium
16:00	Coffee Break	Poster Session I & Coffee Break	Poster Session II & Coffee Break
16:30	Individual Papers	Keynote Lecture	J. Hayes Lecture
17:00			
17:30		SIG Writing Business Meeting	J. Hayes Award & Closing Event
18:00	Editors' Roundtable		
18:45	Port of Honour Reception		
20:00			
20:30	Writers' Dinner & Roundtable		



## Wednesday, July 11, 9:00 – 14:00

9:00 – 10:00	Registration & Coffee ( <i>Entrance Lobby</i> )			
10:00 – 11:00	Opening Ceremony ( <i>Main Auditorium</i> )			
11:00 – 13:00	<b>Symposium</b> <i>Room 250</i>  <b>Chairs: Chanquoy &amp; Fartoukh</b>	<b>Individual Papers</b> <i>Room 249</i>  <b>Chair: Tolchinsky</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Myhill</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Brandão Carvalho</b>
11:00	<b>Writing and Emotions, part I</b> <i>Discussant: Reilly</i>  <b>Iran-Nejad</b> Intrinsic motivation phases of wholetheme - writing-to-understand: A first-person education approach	<b>Joshi</b> The role of orthography in spelling English words among monolinguals and bilinguals	<b>Escorcia</b> Writing in higher education: Professors' conceptions and self-reported writing instruction and evaluation practices	<b>Coutinho</b> Academic writing and personal development in lifelong learning
11:30	<b>MacArthur, Philippakos, &amp; Graham</b> Writing motivation and achievement among struggling college writers	<b>Salas &amp; Caravolas</b> Longitudinal relationships among word-level and text-level features: A cross-linguistic study	<b>Lines</b> Variation in teachers' judgments of writing quality and its impact on classroom discourse	<b>Iñesta, Corcelles, &amp; Castelló</b> Ph. D. students' transitions between academic and scientific writing identity: Learning to write a research article
12:00	<b>Perrin, Ehrensberger-Dow, Fürer, &amp; Gantenbein</b> "voilàààààà wow!" – Verbalizing emotions in collaborative newswriting	<b>Schnitzler &amp; Scheerer-Neumann</b> Spelling acquisition in German during second grade: A developmental continuum in four subgroups	<b>Iparraguirre, Scheuer, &amp; de la Cruz</b> Linguistic variations and writing: Elementary school teachers' views of their students' written language	<b>Breuer</b> The influence of the "old" German way of academic writing on the "new" international one
12:30	<b>Keranen, Encinas, &amp; Bazerman</b> Immersive Emotions of NNEs scientists who regularly publish in English	<b>Llaurado &amp; Tolchinsky</b> The development of spelling in Catalan throughout grade-school	<b>Wilson</b> 'A joyous lifeline in a target driven job': Teachers' metaphors of poetry writing instruction	<b>Donahue &amp; Chaney</b> First-year writing at Dartmouth: Students' rhetorical flexibility
13:00 – 14:00	Lunch ( <i>Entrance Garden</i> )			

## Wednesday, July 11, 14:00 – 16:30

14:00 – 16:00		Individual Papers Room 250	Symposium Room 249	Individual Papers Room 247	Individual Papers Room 246
		Chair: Galbraith	Chair: Wilson	Chair: Van Waes	Chair: Kruse
14:00	<b>Olive, Favart, &amp; Ménard</b> Changes in the management of writing processes between Grade 3 and adults	<b>Developing Understandings of Writing Poetry in Diverse Educational Contexts</b> <i>Discussant: Parr</i>  <b>Dymoke</b> Finding poetry writing in the New Zealand English curriculum  <b>Apol, Certo &amp; Macaluso</b> Preservice teachers’ participation in “author out” poetry writing groups  <b>Wilson &amp; Myhill</b> Ways with words: Teachers’ beliefs and pedagogical practices in the use of metalanguage to teach poetry  <b>Lambirth</b> Teachers’ personal and professional interests in poetry: Exploring the distinction	<b>Boldrini, Cattaneo, &amp; Motta</b> Writing and identifying errors in a faulty procedure as an effective method for learning in VET	<b>D. Leijen &amp; A. Leijen</b> Aspects of language that influence the acceptance of comments and suggestions made by peers in the process of academic writing	
14:30	<b>Limpo &amp; Alves</b> Modeling written composition in Grades 4-9: The contribution of transcription and self-regulation to text generation		<b>Giera &amp; Neumann</b> Professional text genres: Writing standards in vocational education	<b>Iñesta &amp; Castelló</b> Regulation Episodes in expert research article writing: an integrative unit of analysis	
15:00	<b>Bate, Stackhouse, &amp; Perkins</b> The importance of oral language skills for component writing skills in 7-9 year old children		<b>Leijten &amp; Van Waes</b> Professional writing from multiple sources	<b>Harwood &amp; Petric</b> Experiencing supervision: Two case studies of master’s dissertation writers	
15:30	<b>Grabowski, Becker-Mrotzek, &amp; Knopp</b> Subcomponents of writing literacy: Cognitive and linguistic predictors of 5th and 9th graders’ text quality across report, instruction, and argument		<b>Anson, Dannels, Gierdowski, &amp; Kittle-Autry</b> Next-generation feedback: The effectiveness of oral screen-capture response to students’ writing		
16:00 – 16:30		Coffee Break (Auditorium Foyer)			

### Wednesday, July 11, 16:30 – 20:30

16:30 – 18:00		Individual Papers <i>Room 250</i>	Individual Papers <i>Room 249</i>	Individual Papers <i>Room 247</i>
		Chair: Limpo	Chair: V. Johansson	Chair: Jisa
16:30		<b>Fidalgo, Torrance, Rijlaarsdam, &amp; van den Bergh</b> Strategy-focussed writing instruction: Observation alone is sufficient to improve writing in typically-developing 6th grade students	<b>Vale &amp; Sousa</b> What kind of words is more difficult for Portuguese dyslexic children to spell when compared with same reading-level younger children?	<b>Boivin &amp; Pinsonneault</b> A theoretical model articulating writing instruction and grammar instruction
17:00		<b>Martínez, Mateos, Rijlaarsdam, &amp; Martín</b> Reading and writing during synthesis tasks: Quality of on-line reading and writing processes for sixth grade students. Effects of an intervention programme on processes	<b>Calil &amp; Felipeto</b> Process of writing stories made up by newly literate students in the school context: dialogism, memory and autonymic modalization	<b>Jones &amp; Myhill</b> Representing gender diversity in writing research
17:30		<b>Rebelo, Festas, Oliveira, Ferreira, Prata, &amp; Sousa</b> Improvement of writing skills on 8th grade students: A study with the SRSD program in Coimbra schools	<b>Walter, Dockrell, Connelly, &amp; Critten</b> The impact of oral language skills on lexical diversity in written texts	<b>Quinlan</b> The new uses of written language: A distributed analysis
18:00 – 18:45		<b>Editors' Roundtable</b> ( <i>Main Auditorium</i> )		
18:45 – 19:30		<b>Port of Honour Reception</b> ( <i>Entrance Lobby</i> )		
20:30		<b>Writers' Dinner &amp; Roundtable</b> ( <i>Guarany Café</i> )		



**Thursday, July 12, 9:00 – 11:00**

<b>9:00 – 10:30</b>				
<b>Individual Papers</b> <i>Room 250</i>		<b>Individual Papers</b> <i>Room 249</i>		<b>Individual Papers</b> <i>Room 247</i>
<b>Chair: Fidalgo</b>		<b>Chair: Grabowski</b>		<b>Chair: Dockrell</b>
9:00	<b>Braaksma, Rijlaarsdam, &amp; van den Bergh</b> Hypertext writing and observational learning: Effects on process characteristics and quality of writing products	<b>Alves Martins, Salvador, Albuquerque, &amp; Lourenço</b> The impact of an invented spelling programme with pre-school-age children on early reading acquisition	<b>Drijbooms, Verhoeven, &amp; Groen</b> Structure and content coherence in children's written narratives: a neurocognitive approach	<b>Negro, Chanquoy, De Cara, &amp; Hazard</b> Morphology in French spelling
9:30	<b>Proske, Roscoe, &amp; McNamara</b> Game-based practice in writing strategy training	<b>Drexler, Schneevoigt, &amp; Billmann-Mahecha</b> Early semiotic literacy: How do preschool children produce and understand pictograms?	<b>Bourke, Davies, &amp; Blanchard</b> Visual and phonological coding strategies and the development of children's writing skills	<b>Boivin &amp; Pinsonneault</b> Identifying grammatical categories: The key to mastering the spelling of homophones
10:00	<b>Raedts &amp; Rijlaarsdam</b> Influence of writing instruction and cognitive skills on undergraduate students' academic writing	<b>Vasconcelos Horta &amp; Alves Martins</b> Invented spelling programmes and letter names: The phonetization process	<b>Llaurado &amp; Tolchinsky</b> Growth of the text-embedded lexicon in Catalan from childhood to adolescence	<b>Szymanska</b> Tense patterns in conclusion sections of English academic text
<b>10:30 – 11:00</b>	<b>Coffee Break</b> ( <i>Auditorium Foyer</i> )			

Thursday, July 12, 11:00 – 14:00

11:00 – 13:00		Symposium Room 250	Individual Papers Room 249	Individual Papers Room 247	Individual Papers Room 246
		Chair: Chanquoy & Fartoukh	Chair: Quinlan	Chair: Álvares Pereira	Chair: Nottbusch
11:00		<b>Writing &amp; Emotions, part II</b> <i>Discussant: Hayes</i>  <b>Olive, Carré-Bellec, &amp; Cournil</b> Working memory and inhibition of intrusive thoughts during expressive writing	<b>Grabowski</b> The image of handwriting: Legibility, gender, and text quality	<b>Kruse</b> Student beliefs on "good writing": An intercultural study across three languages	<b>Van Steendam, Rijlaarsdam, &amp; Van den Bergh</b> Collaborative revision of other students' writing in a foreign language
11:30		<b>Reilly &amp; Lai</b> Language and emotion in written narratives of children with High Functioning Autism	<b>Barnett &amp; Boella</b> A comparison of the handwriting abilities of French and British children	<b>Fürer, Gantenbein, Perrin, Sick, &amp; Wildi</b> Modeling writing phases	<b>de Gloppe</b> Development in argumentative writing in L1 and EFL of Dutch secondary school students
12:00		<b>Costa, Alves, Barbosa, Olive, &amp; Piolat</b> EMOTAIX.PT, an emotional word database in European Portuguese	<b>Weinzierl</b> Copying strategies of 4th- and 2nd graders: Evidence from pause data analysis	<b>Villalón, Rijlaarsdam, Mateos, &amp; van den Bergh</b> Testing a model of learning through writing: The relationship between students' conceptions, written products and learning outcomes	<b>Jacquin</b> Task-based, integrated reading and writing of literary genres in a foreign language classroom: Does a writing task enhance text comprehension?
12:30		<b>Aillaud, Dalet, Knibbe, &amp; Piolat</b> Effect of a musical induction on the emotional content of a car accident's story	<b>Sausset, Lambert, &amp; Olive</b> Effect of graphomotor constraints on the processing of syllables during handwriting		<b>Lindgren &amp; Stevenson</b> Interpersonal meaning-making: Letters of young writers in Swedish and English
13:00 – 14:00		Lunch (Entrance Garden)			

**Thursday, July 12, 14:00 – 20:00**

14:00 – 16:00		Individual Papers Room 250	Symposium Room 249	Individual Papers Room 247	Individual Papers Room 246
		Chair: Alamargot	Chair: Barnett	Chair: Rijlaarsdam	Chair: Alves Martins
14:00	<b>Arseneau &amp; Boivin</b> Transferring grammatical knowledge in writing contexts: The case of past participle agreement	<b>Writing Difficulties in Children with Specific Language and Motor Disorders</b> <i>Discussant: Berninger</i>  <b>Williams, Larkin, &amp; Blaggan</b> Written language skills in children with specific language impairment  <b>Sumner, Connelly, &amp; Barnett</b> Children with dyslexia are slow writers because they pause more often and not because they are slow at handwriting  <b>Rosenblum</b> Handwriting features of children diagnosed with Developmental Coordination Disorder  <b>Prunty, Barnett, Plumb, &amp; Wilmut</b> Handwriting speed in children with Developmental Co-ordination Disorder: A focus on free-writing and copying tasks	<b>Myhill</b> Finding a language: Metalinguistic understanding in teenage writers	<b>Tolchinsky &amp; Alonso Cortés</b> Kindergarten's knowledge of literacy, teachers' practices and writing achievements at first grade	
14:30	<b>Fryer &amp; Foucambert</b> Subject-verb agreement in writing production: An online observation of the role of semantic and syntactic attractors		<b>Cumming</b> Adolescent Literacies in a Culturally-Diverse Context	<b>Schneevoigt</b> Early literacy and the distinction of drawing and writing in preschoolers: A longitudinal study on German children	
15:00	<b>Flouret, Alamargot, Pontart, Paduraru, &amp; Fayol</b> Development of subject-verb agreement in French: Nature and temporal of processes from grade 3 to grade 12		<b>Wilcox &amp; Yagelksi</b> The Nature of Error in High School Student Writing	<b>Gaitas &amp; Alves Martins</b> First grade teachers practices concerning writing instruction	
15:30	<b>Paduraru, Alamargot, Pontart, &amp; Fayol</b> Avoiding attraction errors during the written production of the subject-verb agreement in French: Functioning of the pregraphic control in adults		<b>Ouellet, Wagner, Dubé, Boily, Gauvin, Prévost, Turcotte, &amp; Cogis</b> The relationship between the performances of Quebec first year high school students in French spelling and grammar		
16:00 – 16:30	Poster Session I & Coffee Break (Auditorium Foyer)				
16:30 – 17:30	Keynote Lecture: J. Hayes (Main Auditorium) Modeling and remodeling writing				
17:30 – 18:30	SIG Writing Business Meeting (Room 250)				
18:45 – 20:00	BUS Tour Sightseeing (Meeting Point at the Entrance Garden)				
20:00	Conference Dinner (Pousada do Porto – Palácio do Freixo)				

**Friday, July 13, 9:00 – 11:00**

9:00 – 10:30	Individual Papers <i>Room 250</i>	Individual Papers <i>Room 249</i>	Individual Papers <i>Room 247</i>	Individual Papers <i>Room 246</i>
	Chair: Castelló	Chair: Spelman Miller	Chair: Connelly	Chair: Torrance
9:00	<b>Bazerman &amp; Simon</b> Climbing on the shoulders: Evidence that referencing reading supports higher level thought expressed in writing	<b>Salvador, Albuquerque, &amp; Alves Martins</b> A qualitative approach to an invented spelling programme with Portuguese pre-school-age children	<b>Tolchinsky, Aparici, &amp; Salas</b> The development of syntactic complexity in written and spoken narratives	<b>Baaijen &amp; Galbraith</b> The role of text production processes in the development of understanding during writing
9:30	<b>Petric &amp; Harwood</b> Citation functions, task requirements and task representation: An interview-based study of the citing behaviour of a successful second-language writer	<b>Alvarado, Fernández, &amp; Vernon</b> Phonemic discrimination and learning to write	<b>Chenu, Jisa, &amp; Mazur</b> Development of syntactic packaging in French across modalities and text types	<b>de Smet, Brand-Gruwel, Leijten, &amp; Kirschner</b> Writing argumentative texts: The effects of electronic outlining on students' writing product and - process
10:00	<b>Russell &amp; Tachino</b> Citing to learn: Analyzing citations in student arguments through an online, multi-media case study	<b>Mata Pereira, Fijalkow, &amp; Alves Martins</b> Didactics and syllabic spellings	<b>Brandão Carvalho</b> The development of syntactic structures in writing: Old data re-analysed through recent theoretical approaches	<b>Nottbusch &amp; Grabherr</b> Writing of tricky words
10:30 – 11:00	Coffee Break ( <i>Auditorium Foyer</i> )			

**Friday, July 13, 11:00 – 14:00**

<b>11:00 – 13:00</b>		<b>Symposium</b> <i>Room 250</i>	<b>Individual Papers</b> <i>Room 249</i>	<b>Individual Papers</b> <i>Room 247</i>	<b>Individual Papers</b> <i>Room 246</i>
		<b>Chairs: Fayol &amp; Berninger</b>	<b>Chair: Coutinho</b>	<b>Chair: Wengelin</b>	<b>Chair: Leijten</b>
11:00		<b>Multiple Levels and Temporal Dimensions of Cognitive ↔ Linguistic Translation Processes Across Development</b> <i>Discussant: Connelly</i>	<b>Cardoso, Álvares Pereira, &amp; Oliveira</b> At school, personal writing also matters: Experiences and evidence	<b>Schmitt</b> How can we measure audience design in written instructions? Expert ratings, expert surface markings, and basic text properties	<b>Nguyen, Rijlaarsdam, &amp; Admiraal</b> Improving L2 writing quality: A series of two intervention studies
11:30		<b>Berninger, Fayol, Hayes, Rijlaarsdam' &amp; Alves</b> Contribution of silent orthography to the cognitive ↔ linguistic translation process  <b>Slusarczyk, Bressoux, &amp; Fayol</b> Does early spelling impact later composing? A longitudinal study	<b>Jeffery &amp; Polleck</b> Adolescent authorial identity in a student-initiated writing group: Examining intersections between school-based and voluntary writing	<b>van Kruiningen &amp; Jansen</b> “The text is written in a very childish manner and a lot of paragraphs are positioned wrongly.” The receipt and implementation of feedback from authentic readers and from peers	<b>Palviainen &amp; Lahtinen</b> Development of fluency in L2 writing
12:00		<b>Arfé, Dockrell, Connelly, Walter, &amp; De Bernardi</b> The relationship between sentence generation, writing, and language in Italian and English developing writers	<b>Elf</b> Two students' writer identities	<b>Spinillo</b> ‘Who is going to read the story that I have written?’ A study on the role of the interlocutor in textual revision	<b>Gonçalves &amp; Sousa</b> Written proficiency in L2 and L1
12:30		<b>Alamargot, Paduraru, Flouret, Pontart, &amp; Fayol</b> Nature and time course of subject-verb agreement during written sentence production: Developmental perspective	<b>Wilcox &amp; Jeffery</b> Authorial identity and agency in adolescent English language learners' stances toward content-area writing	<b>Silva</b> The impact of revision and feedback in the quality of children's written compositions	<b>Van Waes &amp; Leijten</b> Fluency revisited
<b>13:00 – 14:00</b>		<b>Lunch (Entrance Garden)</b>			

## Friday, July 13, 14:00 – 17:30

14:00 – 16:00		Individual Papers Room 250	Symposium Room 249	Individual Papers Room 247	Individual Papers Room 246
		Chair: Olive	Chairs: Espasa & Guasch	Chair: Ragnarsdóttir	Chair: Arfé
14:00	<b>Torrance &amp; Oxborough</b> Factors affecting keystroke latency and fixation location in adults composing multi-sentence texts	<b>The Role of Formative Feedback in Collaborative Writing in Online Learning Environments or Computer Supported Environments</b> <i>Discussant: Rijlaarsdam</i>  <b>Strobl</b> Individual and collaborative L2 writing using online technologies: The effect of pre-programmed teacher feedback and direct peer feedback on process and product  <b>Ortoleva, Schneider, &amp; Betrancourt</b> Writing and peer feedback to promote professional development in vocational education  <b>Mauri &amp; Onrubia</b> Spontaneous feedback among students in a small group collaborative writing task  <b>Guasch, Espasa, Alvarez, &amp; Kirschner</b> How do students utilize teacher’s feedback and peer feedback in online learning environments	<b>J. E. Jiménez</b> EGWA (Early Grade Writing Assessment): A tool for writing assessment in early grades	<b>Pontart &amp; Alamargot</b> Evolution of handwriting constraints from grades 2 to 9: Impact on spelling development	
14:30	<b>V. Johansson &amp; Gustafson</b> Writing development during adolescence – what keystroke logging can reveal		<b>Jost, Knopp, Becker-Mrotzek, &amp; Grabowski</b> Assessing text quality: Explaining and comparing different rating scales	<b>Connelly, Dockrell, Walter, &amp; Critten</b> The effect of language, spelling and handwriting on text quality and written language bursts in children with language impairment and typically developing controls	
15:00	<b>R. Johansson, Wengelin, V. Johansson, &amp; M. Johansson</b> Reading a finished text versus reading your own emerging text		<b>Dimakos, Lavdas, Triantafyllaki, &amp; Efthimiou</b> Alternative assessment methods for writing	<b>Wengelin, R. Johansson, &amp; V. Johansson</b> Writing difficulties in Swedish university students with reading and writing difficulties	
15:30	<b>Galbraith &amp; Baaijen</b> Issues in key-stroke logging analysis		<b>Thygesen &amp; Fasting</b> Developing national standards for the assessment of writing. A tool for teaching and learning	<b>Oxborough &amp; Torrance</b> Does cohesion rely on visual feedback from the emerging text?	
16:00 – 16:30		Poster Session II & Coffee Break (Auditorium Foyer)			
16:30 – 17:30		J. Hayes Lecture: R. Kellogg (Main Auditorium) Working memory in written composition: A progress report			
		J. Hayes Award & Closing Event (Main Auditorium)			



**Poster Session I**  
**Thursday, July 12, 16:00 – 16:30**

<b>Spelling</b> Discussant: Salas	<b>Writing Assessment</b> Discussant: Sausset	<b>Reflective Writing</b> Discussant: Fartoukh	<b>Teachers' Practices</b> Discussant: Walter
<p><b>P1-I: Broc, Olive, Bernicot, Favart, &amp; Reilly</b>                      Spelling abilities in French-speaking children with Language Impairment</p> <p><b>P2-I: Oddsdóttir, Ragnarsdóttir, Birgisdóttir &amp; Gestsdóttir</b>                      The development of spelling and punctuation and its relation to reading and self-regulation: A longitudinal study of 6-8 year old Icelandic children (P2-I)</p> <p><b>P3-I: Sucena, Serrano, Castro &amp; Defior</b>                      Spelling acquisition: A cross-linguistic comparison between Portuguese and Spanish first graders</p> <p><b>P4-I: O'Shanahan &amp; J. E. Jiménez</b>                      Spelling development in the Spanish Language across different countries: Spain, México and Chile</p>	<p><b>P5-I: Palviainen, Kalaja, Mäntylä, &amp; Huhta</b>                      Assessing fluency in L2 writing</p> <p><b>P6-I: Frid, Wengelin, V. Johansson, R. Johansson, &amp; M. Johansson</b>                      Testing the temporal accuracy of keystroke logging using the sound card</p> <p><b>P7-I: Asker-Árnason, Grenner, V. Johansson &amp; Sahlén</b>                      Working memory and pause patterns in the writing of teenagers with hearing impairment</p>	<p><b>P8-I: Adams-Tukiendorf</b> Examination of student self-perception in academic writing</p> <p><b>P9-I: Smeets</b>                      Teaching academic skills as an introduction to epistemological empowerment</p> <p><b>P10-I: Barbeiro</b>                      The textual dimension and its relation to writing</p>	<p><b>P11-I: Santos, Álvares Pereira, &amp; Ribera</b>                      Dictation to adults: A practice that is urgent in Portugal</p> <p><b>P12-I: Rietdijk, Janssen, de Maat, &amp; Rijlaarsdam</b>                      Better writing in elementary education: Design principles for effective writing lessons</p> <p><b>P13-I: Graça &amp; Álvares Pereira</b>                      The contribution of synopsis to analyze in-classroom teaching practices</p>



**Poster Session II**  
Friday, July 13, 16:00 – 16:30

<b>Writing Skills Acquisition</b> Discussant: Salas	<b>Narrative Writing</b> Discussant: Drijbooms	<b>High-School and Academic Writing</b> Discussant: Iparraguirre	<b>Teachers' Conceptions</b> Discussant: Walter
<p><b>P1-II: Bontemps, Eme, &amp; Olive</b> Writing acquisition difficulties in French adult literacy students: A comparison with reading level-matched children</p> <p><b>P2-II: Sucena &amp; Castro</b> The acquisition of orthographic representations: a longitudinal study with Portuguese first graders</p> <p><b>P3-II: Baldi, Devescovi, &amp; Longobardi</b> The development of pre-writing skills: A pilot study</p>	<p><b>P4-II: V. Johansson, Åkerlund, Sahlén, &amp; van de Weijer</b> Improving narrative writing through peer observation and language training</p> <p><b>P5-II: O'Shanahan, J. E. Jiménez, &amp; A. Jiménez</b> Are there differences between dyslexics and normally achieving readers in narrative writing?</p> <p><b>P6-II: Longobardi, Renna, &amp; Spataro</b> How narrative structure changes in the stories written by Italian children of primary school</p>	<p><b>P7-II: Fuentealba, Corcelles, &amp; Castelló</b> Collaborative writing: Co-regulation strategies of high school students to write an argumentative text</p> <p><b>P8-II: González-Lamas, Cuevas, &amp; Mateos</b> The impact of three intervention programs to improve the quality of argumentative synthesis</p> <p><b>P9-II: Rodrigues &amp; Lopes</b> Writing-from-sources: From a reproductive to a reflective interdisciplinary approach in Portuguese Higher Education</p> <p><b>P10-II: Sandstrom</b> Do we say that? Discourse assimilation through L2 doctoral students' web-mediated peer review practices</p>	<p><b>P11-II: Almeida, Veiga Simão, &amp; Malpique</b> Collaborative teacher training in writing: When teachers become writers</p> <p><b>P12-II: Eelkema</b> Cognitive change processes of teachers in reaction to the implementation of a pedagogy of the use of feedback logs in subsequent FL writing tasks</p> <p><b>P13-II: Graça &amp; Álvares Pereira</b> Synopsis: a specialized methodological tool for teaching analysis</p>

## **ABSTRACTS**

**Wednesday** (p35 – blue)

Opening Ceremony (p37)

Editors' Round Table (p83)

Writers' Round Table (p84)

**Thursday** (p85 – green)

Keynote Lecture (p147)

**Friday** (p151 – pink)

J. Hayes Lecture (p213)

**Pre-Conference Workshops** (p217)



**Wednesday, July 11**

9:00 – 10:00	Registration & Coffee			
10:00 – 11:00	Opening Ceremony			
11:00 – 13:00	Symposium Room 250	Individual Papers Room 249	Individual Papers Room 247	Individual Papers Room 246
	Chairs: Chanquoy & Fartoukh	Chair: Tolchinsky	Chair: Myhill	Chair: Brandão Carvalho
11:00	Iran-Nejad MacArthur,	Joshi	Escorcia	Coutinho
11:30	Philippakos, & Graham Perrin, Ehrensberger-	Salas & Caravolas	Lines	Iñesta, Corcelles, & Castelló
12:00	Dow, Fürer, & Gantenbein	Schnitzler & Scheerer- Neumann	Iparraguirre, Scheuer, & de la Cruz	Breuer
12:30	Keranen, Encinas, & Bazerman	Llaurado & Tolchinsky	Wilson	Donahue & Chaney
13:00 – 14:00	Lunch			
14:00 – 16:00	Individual Papers Room 250	Symposium Room 249	Individual Papers Room 247	Individual Papers Room 246
	Chair: Galbraith	Chairs: Wilson	Chair: Van Waes	Chair: Kruse
14:00	Olive, Favart, & Ménard	Dymoke Apol, Certo & Macaluso Wilson & Myhill Lambirth	Boldrini, Cattaneo, & Motta	D. Leijen & A. Leijen
14:30	Limpo & Alves		Giera & Neumann	Iñesta & Castelló
15:00	Bate, Stackhouse, & Perkins		Leijten & Van Waes	Harwood & Petric
15:30	Grabowski, Becker- Mrotzek, & Knopp			Anson, Dannels, Gierdowski, & Kittle- Autry
16:00 – 16:30	Coffee Break			
16:30 – 18:00	Individual Papers Room 250	Individual Papers Room 249	Individual Papers Room 247	
	Chair: Limpo	Chairs: V. Johansson	Chair: Jisa	
16:30	Fidalgo, Torrance, Rijlaarsdam, & van den Bergh	Vale & Sousa	Boivin & Pinsonneault	
17:00	Martínez, Mateos, Rijlaarsdam, & Martín	Calil & Felipeto	Jones & Myhill	
17:30	Rebelo, Festas, Oliveira, Ferreira, Prata, & Sousa	Walter, Dockrell, Connelly, & Critten	Quinlan	
18:00 – 18:45	Editors' Roundtable			
18:45 – 19:30	Port of Honour Reception			
20:30	Writers' Dinner & Roundtable			



**Wednesday, July 11**

**10:00 – 11:00**

*Main Auditorium*

## **OPENING CEREMONY**

### **Welcome to SIG Writing Porto 2012!**

#### **Welcome by**

Rui Rio, Porto City Mayor

Carlos Mota Cardoso, President of Porto City of Science

José Carlos Marques dos Santos, Rector of the University of Porto

José Alberto Correia, Director of FPCEUP

Barbara Arfé, SIG Writing Coordinator

Rui A. Alves, Conference Manager

#### **Musical moment by *Sky Notes Trio***

Carlos Paredes: Verdes Anos

Corelli: Concerto Grosso No.8, Adagio, Allegro and Vivace

Mozart: Eine Kleine, 1<sup>st</sup> movement

Vivaldi: Concerto in G Major, 1st movement



**Symposium**

**Writing & Emotions, part I**

Lucile Chanquoy & Michael Fartoukh

Université de Nice - Sophia Antipolis, France

Since Hayes and Flower (1980) models, writing has been widely studied in the field of cognitive psychology. Much research has focused on the different kinds of knowledge involved (i.e., content and language), on writing processes (planning, translating, revising) and on the impact of the cognitive system (working memory, long-term memory) on the quality and quantity of writing (see Alamargot & Chanquoy, 2001). Thus, the different aspects of writing expertise (Kellogg, 2006) and the modalities of writing development have been identified (Berninger & Swanson, 1994). In 1996, Hayes proposed “A new framework for understanding cognition and affect in writing” that had an important impact on the study of cognitive and affective aspects of writing. However, there is still little research on this topic whereas the literature about “emotion and cognition” is very abundant (Sander & Scherer, 2009).

Therefore, the aim of this symposium is to present some studies analyzing the interaction between emotions and writing processes both in expert and novice writers. It seems to us that it is important to investigate the impact that the writer’s “emotional state” has on the written text, and how the affective load of the task impacts on cognitive processes.

**Discussant**

Judy Reilly

San Diego State University, US & Université de Poitiers, France



**Intrinsic motivation phases of wholetheme - writing-to-understand:**

**A first-person education approach**

Asghar Iran-Nejad

The University of Alabama, US

Even though many educators require learners to do reflective journaling as a method for teaching higher thinking, there are just as many who claim that the method produce no higher learning (Staib, 2003).

One goals of this presentation is to show that a major source of this writing-to-know problem is the 2nd/3rd-person approach to educational research and practice (Iran-Nejad & Stewart, 2010). In this approach, learners are required to write to learn someone else's knowledge, e.g., teacher, scientist, or textbook author. This kind of writing to acquire knowledge seldom moves beyond internalization of external content by maintenance or constructive rehearsal of the input in working memory long enough to composed into own words and well enough to avoid plagiarism (Shulman, 1986, 2002). Accordingly, a great deal of time and effort in writing to learn is expended on overcoming the limitation of the working memory (Hayes, 2006): For instance, anyone "who has composed a brilliant sentence and then forgotten the end of it before it could be committed to paper has experienced one of the problems that limited memory creates for writers" (p. 2). Unfortunately, there is no inherent way to build in affect into this way of writing-to-know except inserting a box in a flowchart or a node in a memory network (Bower, 1981; Bower, Gilligan, & Monteiro, 1981; Bower & Mayer, 1985; Zajonc, 1980).

My second goal is to discuss and present evidence for a radically different 1st-person education approach to writing-to-understand (Iran-Nejad, 1989; Iran-Nejad & Gregg, 2011). For more than a decade, we encourage students to seek their own revelations or insights and write-to-reflect on their clicks of understanding. The course syllabus may ask students to select their most striking revelation of the week, compose a simple sentence (12 words max), and compose a paragraph (120 words max) to reflect on the ideas in the insight. These and other data will show how understanding but not knowledge correlates with affect and how the multiple-phase course of a wholetheme writing-to-understand is intrinsically motivating (Iran-Nejad, Watts, Venugopalan, & Xu, 2007).

✉ [airannej@bamaed.ua.edu](mailto:airannej@bamaed.ua.edu)

## Writing motivation and achievement among struggling college writers

Charles MacArthur<sup>1</sup>, Zoi Philippakos<sup>1</sup>, & Steve Graham<sup>2</sup>

<sup>1</sup>University of Delaware, US

<sup>2</sup>Vanderbilt University, US

The purpose of the current study was to investigate motivational factors and their relationship to writing achievement among basic writers in community colleges (2-year colleges in the USA). Research has found relationships between writing achievement and several motivational constructs (e.g., Bruning & Horn, 2000; Pajares & Valiente, 2006), but little research has focused on this population. Based on prior research, scales were developed to measure achievement goals for writing, beliefs about writing, self-efficacy for writing, and affect. The achievement goals scale included mastery, performance-approach, and performance-avoidance goals. The beliefs scale assessed beliefs about the importance of development of ideas (substance) and writing conventions. The self-efficacy scale was designed to measure efficacy for skills, writing tasks, strategies, and self-regulation. The affect scale assessed how much students liked to write.

The study included 133 students (50% male; mean age 21; 50% minorities) from two levels of basic writing classes. Data included scores on a computer-based writing test, two writing tests from the Woodcock-Johnson III, and a writing sample scored for quality and conventions. Principal components factor analyses were completed for the goals, beliefs, and self-efficacy scales. For goals, factors were found for avoidance, performance, and mastery goals, which explained 27%, 23%, and 9% of the variance, respectively. For belief, factors were found for substance and conventions, explaining 30% and 19% of the variance. Analysis of the self-efficacy scale found only one reliable factor, explaining 55% of the variance, and the affect scale had a single factor explaining 71% of the variance.

Significant correlations were found between writing achievement measures and two motivational factors -- writing achievement was negatively correlated with avoidance goal orientation and with belief in the importance of conventions. Self-efficacy was not significantly correlated with achievement. Group comparisons by level of writing class were significant for all motivational factors except substance beliefs and affect. Students in the lower level classes scored lower in mastery goals and performance goals but higher on avoidance goals, higher in beliefs about the importance of conventions, and lower in self-efficacy. Results were as expected except for affect. By the conference, we will have data to compare basic writing students with typical college students.

✉ charles.macarthur@gmail.com

## **“voilàààààà wow!” – Verbalizing emotions in collaborative newswriting**

Daniel Perrin, Maureen Ehrensberger-Dow, Mathias Fürer, & Thomas Gantenbein

Zurich University of Applied Sciences, Switzerland

Analyzing the interaction between emotions and writing processes requires methodological access both to writing activities and to “the many meanings/aspects of emotions” (Izard, 2010, see also Gendron, 2010). Due to the complexity of the topic, most research on “emotions and the writing process” (Brand & Powell, 1986) has been done in experimental settings. Field research on real-life emotions in real-life writing processes still appears to be an uncharted area. By investigating novice and expert journalists’ verbal emotional displays in settings of collaborative newswriting, we aim to fill this research gap.

Over the past few years, we have been involved in large transdisciplinary research projects that have investigated journalists’ text production processes (Perrin, 2012). Data were collected and analyzed with Progression Analysis, an ethnographically-based multimethod approach (Perrin, 2003). The objective of all of these projects has been to identify individual and organizational workplace practices and strategies in newsrooms. The multilingual, multicultural design of the projects and the data corpora generated allow for comparative analyses across languages, newsroom cultures, and writers’ expertise. We have re-analyzed data to focus specifically on emotional displays in newsrooms and differences between novice and expert writers.

We begin our presentation by discussing the research question in more detail (part 1); then explain how knowledge gained from related research can be applied to address emotions in collaborative newswriting (part 2); describe our multimethod approach, Progression Analysis (part 3); present exemplary findings from German- and French-speaking contexts (part 4); and discuss how insights from this research can be generalized and can contribute to increasing scientific and professional (meta-)linguistic knowledge and awareness related to journalistic writing in general and its interplay with affect and emotions in particular (part 5).

✉ daniel.perrin@zhaw.ch

## **Immersive Emotions of NNES scientists who regularly publish in English**

Nancy Keranen<sup>1</sup>, Fatima Encinas<sup>1</sup>, & Charles Bazerman<sup>2</sup>

<sup>1</sup>Benemerita Universidad Autonomia de Puebla, Mexico

<sup>2</sup>University of California Santa Barbara, US

As part of an in-depth interview study of the dispositions towards writing in English of NonNative English Speaking scientists who regularly publish their work in English, we examined several emotional aspects of their writing processes. Our study contrasts with a number of other published interview studies of NNES scientists who struggle to publish internationally. Our interviews consisted of three parts: a face to face life narrative interview using a personal timeline as a prompt; a face to face dialogic completion of an experiential array (adapted from Gordon & Dawes, 2005) that elicited beliefs, emotions, strategies, and behaviors with respect to the target competence; and follow-up questions through email. Our subjects were fourteen mid-career to senior scientists working at a major Mexican university who had multiple publications in English and were members of their national scientific academy. Most directly we inquired into their sustaining emotions towards writing in English that carried them through writing processes and signal emotions that helped them identify difficulties in their processes. Emotionally they feel challenged and rewarded, both internally and externally for their efforts, so they continue to do it in spite of the negative emotions which signal difficulties, which necessitate adopting alternative strategies. Indirectly, and more interestingly, their entire dispositions can be characterized in terms of the emotional set associated with immersion, most fully investigated in relation to computer gamers. Immersive states include a suspension of other activities with their cognitive and emotional demands, enjoyment of the on-going actions as well as the rewards and statuses that come with success in the activity, identification with the roles one takes on as a participant, affiliation with other participants who one collaborates or cooperates with, and investment in succeeding. Immersed participants also experience the state of flow, where they are working with extreme levels of concentration at the limits of their cognitive ability, with fleeting suspensions of time and physical reality. When this extremely pleasurable state is over, however, it may be followed by disorientation and physical exhaustion.

✉ lajoya108@yahoo.com

## **The role of orthography in spelling English words among monolinguals and bilinguals**

R. Malatesha Joshi

Texas A & M University, US

Even though, spelling may be a better indicator of a person's literacy skill, it has not received as much attention as reading in both research and instruction. This may be due to the mistaken notion that English spelling is irregular. As Chomsky and Halle noted, English orthography is a near optimal system for lexical representation. In this presentation, I like to report results from various studies related to the nature, assessment, and intervention of spelling English words. In the first series of studies, we found that the nature of writing system (alphabetic, Morphosyllabic, and syllabic) has an influence on spelling English words. Participants exposed to alphabetic writing system performed significantly better than those exposed to syllabic and morphosyllabic writing systems. The results were interpreted in light of the Orthographic Depth Hypothesis. In the second set of studies, we found that orthographic awareness and morphological awareness contributed more for spelling English words among Chinese participants while phonological awareness and morphological awareness contributed more for spelling English words among English speaking participants. In the third set of studies, spelling error analyses of English speaking children showed that depending on the spelling level, children committed different kinds of errors and better spellers made errors that could be classified as higher level errors like orthographic and morphological errors, while poor readers made errors that could be classified as lower level errors, like phonological and phonetic errors. In the fourth set of studies, intervention studies using explicit systematic instruction and found that there was a significant improvement in the spelling performance of participants after 12 weeks of instruction. The results from these studies are interpreted in terms of nature of different orthographies and the need for error analyses in spelling assessment as well as the need for systematic and explicit instruction.

✉ [mjoshi@tamu.edu](mailto:mjoshi@tamu.edu)

**Longitudinal relationships among word-level and text-level features:  
A cross-linguistic study**

Naymé Salas & Markéta Caravolas

Bangor University, UK

The relationship between spelling and writing remains an open question in early literacy research. Specifically, the relationship between the two skills from a cross-linguistic perspective has been largely ignored, at least in children at the very early stages of writing development. It was the aim of this study to examine the longitudinal relationships among groups of word-level and text-level writing measures obtained from semi-spontaneous text productions by English- and Spanish-speaking children at the outset of formal literacy instruction. We aimed to determine (1) the precise nature of the relationships among individual measures within word-level writing and text-level writing and (2) the extent to which spelling performance predicted both levels of writing (word and text), across the first year and a half of formal literacy instruction in each language group. One hundred seventy-three British children (mean age at Time 1: 60.05 months) and 167 Spanish children (mean age at Time 1: 75.77 months) were assessed three times for this study (mid-Year 1 (Time 1), end of Year 1 (Time 2), and mid-Year 2 (Time 3). Children completed a five-minute writing task, where they had to report recent past events. Word-level writing was evaluated by spelling accuracy, word segmentation, and capitalization, whereas text-level writing was evaluated by length (number of words), text layout, use of connectors, punctuation, syntactic complexity and lexical information. Results indicated that word-level measures were consistently related in both languages, while text-level measures showed more varied patterns of relations in each language group. Moreover, spelling performance significantly predicted word-level writing, but not text-level writing. Cross-linguistic comparisons showed quantitative differences, rather than qualitatively different patterns, in the sense that the strength of the correlations among the different measures, as well as model fit, were usually greater for English than for Spanish. Conclusions will be discussed in the light of current theories of writing development.

✉ [n.salas@bangor.ac.uk](mailto:n.salas@bangor.ac.uk)

**Spelling acquisition in German during second grade:  
A developmental continuum in four subgroups**

Carola Schnitzler & Gerheid Scheerer-Neumann

University of Potsdam, Germany

Spelling acquisition in German, a rather transparent orthography, depends on a thorough understanding of the phonographic principle. This plays a decisive role with respect to the construction of spellings in the beginning of primary school. It's relevance remains as a foundation even of orthographic spellings in later grades. The majority of German spelling children begin to shift their attention from phonological to orthographic features of spelling during second grade. Therefore, this point in time seems to be crucial for an in depth analysis of spelling development in German.

A total of 178 children completed a list of 24 words at the beginning, in the middle and at the end of second grade. To investigate systematically the mastering of phonographic spelling, the items focused more on phonological than on orthographical difficulty. After the first testing, the children were divided into four subgroups according to their spelling competence. The total number of correct spellings was calculated. The remaining spellings were analyzed regarding their phonological completeness and plausibility into three categories, which indicate an increasing phonographic competence. Looking at the development of the different performance groups over time, results confirmed the temporal stability of spelling attainment. Results of a cluster analysis revealed qualitatively different spelling profile groups, where profiles are defined by proportion of correctly spelled words and graded phonographic approximations. Average profile characteristics clearly showed that subgroups whose profiles reflect different spelling proficiency at one point in time display performance along a developmental continuum within and between groups. The group with the highest performance showed a profile at the beginning of second grade, which was very similar to the profile of the weakest group at the end of the same grade. Furthermore, another group's development seemed to lag behind the majority of children at first testing revealing a rather large proportion of orthographically wrong, but phonologically plausible errors. Their good final performance supports the importance of a phonological basis of orthographic spelling representations in German. Implications regarding children's spelling development, spelling assessment and instruction in research as well as in practice will be discussed.

✉ carola.schnitzler@uni-potsdam.de

## **The development of spelling in Catalan throughout grade-school**

Anna Llaurado & Liliana Tolchinsky

University of Barcelona, Spain

Alphabetic writing systems represent the phonological structure of a given language. Most of them, however, represent morphological constructs also. Precisely, the task children confront when learning to write consists of perceiving the relationship between the orthographic system they are learning and the phonological and morphological segments represented by it. In this study we tracked the developmental path from phonetic to orthographic spelling shown by 267 native speakers of Catalan attending 1st through 5th school grade.

Catalan is a romance language spoken in north-eastern Spain. Central Catalan, the variant focused on in this study, serves as standard and has a moderately transparent orthography. The 33 phonemes of central Catalan are represented by 27 letters with a relatively low phoneme to letter consistency since only 10 phonemes are unequivocally represented by one letter. Most frequently, letter choice is restricted by context dependent rules. However, in a number of cases letter choice needs to be etymologically derived. Typologically, Catalan is a synthetic inflectional language with a rich inflectional and derivational morphology. In most cases, strictly phonetic to written mapping renders incorrect spelling of morphological segments and morphological awareness becomes useful for attaining correct spelling.

Participants were required to produce written vocabularies in 5 different semantic fields: food, clothing, leisure activities, traits of personality and natural phenomena. Their productions were characterized in terms of orthographic (in)accuracy. Spelling errors were classified into: (1) phonological, where phonological information on its own is sufficient; (2) orthographic, where knowledge of contextual rules or word forms is necessary and (3) morphological, where morphological awareness is helpful for correct spelling. Results show that phonological errors decreased with school level from 1st to 3rd grade whereas orthographic and morphological errors remained more stable across the first years of schooling. There was, however, an influence on semantic field on the amount and quality of the observed errors. For instance, the lexicon of natural phenomena, mostly text-book based vocabulary, presented less errors than the lexicon of food in spite of the higher frequency of the later. Implications of these findings for the teaching of spelling will be discussed.

✉ [anna\\_llaurado@yahoo.es](mailto:anna_llaurado@yahoo.es)



## **Writing in higher education: Professors' conceptions and self-reported writing instruction and evaluation practices**

Dyanne Escorcía

Université de Poitiers, France

The present study joins the field of researches on writing in university, by comparing two cultural and linguistic contexts, one French university and one Colombian university. In these contexts, several difficulties of students concerning academic writing have been identified, but there are not enough studies that explore the pedagogical practices of teachers, or their impact in the students' writing difficulties. For these reason, this research targeted the description of a) conceptions and b) pedagogical practices (instruction and evaluation) declared by professors regarding writing in higher education. With a socio-cognitive perspective, this study analyzes whether their declarations contemplate a perspective that seems essential to succeed in writing at the university level: the cognitive benefits of writing.

Ten psychology professors (ages 28 to 59) from institutions concerned were interviewed about three specific questions: What is writing for you? What advice do you give to your students to write their papers? What criteria do you use to evaluate the student's written documents? A content analysis of the interviews was conducted in order to identify thematic categories and analyze in depth the conversational segments linked to this categories. We found three results in particular:

- *Two professors' conceptions:* a) the writing is defined according to specifics rules and parameters of academic texts; b) writing is a cognitive process that allows individuals to transform and express their ideas. The second conception, which refers to the epistemic function of the writing process, was less addressed.
- *A congruency between their conceptions and the writing instruction practices reported.* Professors say primarily that they inform the students about the norms to organize and structure written documents. A small number of professors explain their students how to use the writing process as an instrument to learn and develop thinking skills.
- *A discrepancy between the writing instruction and evaluation practices self-reported particularly by the French professors.* The reflective aspect of the writing appears to be an important criterion to evaluate the students' written documents. However, the professors did not describe it as part of what they tell the students about the requirements to write papers.

In conclusion, although the reflective writing (skills such as thinking carefully and deeply analyzing an event or idea ) appears to be important when evaluating the students' written documents (primarily the French professors), it was found that the epistemic function of the writing has little importance in the professors' conceptions and self-reported practices.

✉ dyanne.escorcía@gmail.com

## **Variation in teachers' judgments of writing quality and its impact on classroom discourse**

Helen Lines

University of Exeter, UK

Research into teacher judgment of writing quality has revealed a picture of variation and discrepancy (Huot, 1990), evaluative ambiguity and conflict (Broad, 2000) and subjectivity (Beck, 2006). Conflicts can be exacerbated by the application of standardised assessment criteria, especially in the context of high-stakes summative assessment: research from Australia reports tension between teachers' 'global' judgments of writing quality, drawing on published criteria, and 'local' judgments, based on classroom experience and knowledge of individual students, confirming that evaluation is an emotional practice for teachers, heavily influenced by classroom interactions. Huot & Perry (2009) have called for a re-focusing of research into writing assessment, to take better account of the discourse community of the classroom and to emphasise its instructional value. In the classroom context where evaluation has a formative, instructional purpose, how students receive and take up teachers' judgments is of obvious importance in developing evaluative expertise (Sadler 2009).

This paper focuses on the context of the secondary school writing classroom in which teachers make day-to-day judgments of writing quality as they read and respond to students' texts. The paper draws on qualitative data derived from a large-scale investigation into the impact of embedded grammar teaching on the writing of 12-13 year olds, conducted in 31 schools over one academic year. Questions relating to writing quality and its assessment were included in interview schedules. Inductive analysis of interviews indicates that teachers' conceptualisations of writing quality are internally consistent but that variation between teachers is marked. Teachers not only valued different qualities in writing, but experienced differing degrees of conflict and ambiguity when relating their personal construct of quality to the official, public construct. The findings support earlier views of teacher judgment as richly textured and complex. In addition, analysis of data from lesson observations carried out each term indicates that teachers' personal constructs have some influence on the nature of classroom discourse about writing quality. This is illustrated by a close comparison of two teachers' contrasting practice.

✉ [H.E.Lines@exeter.ac.uk](mailto:H.E.Lines@exeter.ac.uk)

## **Linguistic variations and writing: Elementary school teachers' views of their students' written language**

María Sol Iparraguirre<sup>1</sup>, Nora Scheuer<sup>2</sup>, & Montserrat de la Cruz<sup>2</sup>

<sup>1</sup>Universidad de Buenos Aires, Argentina

<sup>2</sup>Universidad Nacional del Comahue, Argentina

In elementary schools, the teaching-learning process is mainly based on linguistic communication. In particular, written language is both object and means of instruction, with a pervading presence in assignments and assessments. Teachers' expectations about their students' learning are often influenced by how they perceive and value their students' linguistic variety (Heredia & Bixio, 1991). However, among the broad range of linguistic forms present in complex societies, those used mainly by urban middle/high socio-economical groups are privileged in schooling. This limited educational receptivity to socio-regional linguistic variations contributes to deepen educational exclusion processes (Iparraguirre, 2010), affecting mostly students from under-privileged social groups (Snow, 2006).

The aim of this study is to explore teachers' awareness of linguistic variations in writing. Our research questions are: How do teachers conceive of the specific features of their students' written language, writing progress during schooling and difficulties when writing; as well as the aims of teaching to write in elementary education and the ways in which teachers and children's families contribute to achieve them? Do teachers show awareness of and receptivity to their students' particular socio-linguistic features?

We selected four schools in North-western Patagonia (Argentina) with different school modalities and diverse degrees of geographical and social integration. A written questionnaire was designed in order to explore teachers' conceptions (mentioned above), by means of open-ended questions. All the teachers in these schools (n=39) were asked to complete the questionnaire individually in the term of two weeks; 26 of them returned it.

We applied lexicometry -a computational method for the analysis of textual data (Lebart, Bécue and Salem, 2000)- to the complete transcriptions of teachers' handwritten answers. Teachers' answers showed little articulation with socio-linguistic, cognitive or educational theories, revealing a mechanical and rigid view of written language. Teachers did not seem to acknowledge that their students' linguistic variations when writing offer useful and necessary information to work with. Results highlight the need to improve teachers' linguistic professional training, concerning specific features of writing along with sociolinguistic and register variations that pervade written language.

✉ msoliparraguirre@gmail.com

**‘A joyous lifeline in a target driven job’:  
Teachers’ metaphors of poetry writing instruction**

Anthony Wilson  
University of Exeter, UK

Previous studies of the value of poetry teaching have focused on poetry as a tool, which can be used to explore and develop affective responses of learners within a ‘personal growth’ model of English teaching, influenced heavily by Romanticism. There is not a tradition of critical examination in this research, neither of the personal growth model nor teachers’ constructs of poetry. Drawing on Vygotsky’s notion (1978), developed by Bruner (1986), of learners growing into ‘the intellectual life of those around them’, this paper reports on a small-scale questionnaire survey of teachers’ thinking about poetry writing and their instructional practices. The questionnaire was disseminated to an opportunity sample of two separate groups of teachers attending in-service training on poetry writing instruction. Thirty-three teachers, with a range of teaching experience and service, took part in the study. Questionnaire responses were coded iteratively to ensure the integrity of the coding themes that were decided upon (Strauss and Corbin, 1990). The process was recursive and comprised four stages: open coding (Strauss and Corbin, 1990, p.61); grouping clusters of metaphors thematically; labelling of themes; and linking of codes to even broader themes to describe and summarise the teachers’ responses. I justify analysing the responses as a corpus because of the highly specific context in which they were given (Miles and Huberman, 1994, pp.56-7). This paper presents, analyses and evaluates the central metaphor of ‘freedom’ used by teachers. This presents poetry writing instruction in four contrasting ways: as freedom to explore personal creativity; as a site of integrated thinking; as a rejection of ‘formulaic writing’; and as freedom from curricular ‘directives’. The paper will argue that these metaphors indicate considerable personal investment by teachers of poetry and that they consider the teaching of poetry to have impact as much on themselves as on pupils. It is also argued that metaphors of optimism for the potential of poetry writing are counterbalanced by those of anxiety as to poetry’s status. Drawing on theoretical perspectives from research on writing and metaphor, the paper makes a new contribution to understanding about poetry in the field of writing and creative writing instruction.

✉ a.c.wilson@exeter.ac.uk

## Academic writing and personal development in lifelong learning

Maria Antónia Coutinho

Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa, Portugal

Deepening the reflection on academic writing difficulties endured by adults beginning their university studies, this paper aims at sharing some possible ways to develop 'good practices' in this domain.

Underlying the fundamental contributions of Vygotsky and Voloshinov, we will assume *Socio-Discursive Interactionism* (SDI) epistemological and theoretical framework (Bronckart, 1997, 2008). A global view of SDI assumptions and work programme is supposed to point out an integrated approach of language, necessarily associated with social activities and knowledge issues. Such approach could not be reduced to a strict linguistic phenomenon. However, the core role played by texts and discourses must be emphasized: as platforms between texts and linguistic units (or micro-units), discourses seem to be fundamental from a linguistic point of view; besides, as they allow a personal "negotiation" between social constraints (managed by text genre) and personal possibilities or choices, they fulfil a crucial task from a psychological point of view.

Dealing with texts produced by Portuguese adult students beginning their university studies, we will focus on how different components can interfere in writing difficulties and /or writing developments. Contextual parameters, discourse types and (micro)linguistic devices are involved in different text genres. Data collection and analysis is developed in three steps. First, the students were asked to explain their own relationship with writing and to describe their difficulties, concerning academic writing; besides, they had to carry out an academic writing task, including summarizing and discussing contents. Academic writings are analysed, concerning the reflection on the aims to be attained, and from a linguistic point of view, involving discourse decisions and their ability to attain the referred aims. These analyses are developed in interaction with each student, in order to provide conscious adjustments and corrections. At the end, students are supposed to tell again how they feel about their writing process.

By text analysis and explicit testimony from the students concerned, we will stress the need of aware and reflexive policies, in order to increase a fluent writing. To conclude, we will argue that (academic) writing development is part of a larger conscious process of personal development, particularly meaningful when entering the University.

✉ [acoutinho@fcsh.unl.pt](mailto:acoutinho@fcsh.unl.pt)

**Ph. D. students' transitions between academic and scientific writing identity:  
Learning to write a research article**

Anna Iñesta<sup>1</sup>, Mariona Corcelles<sup>2</sup>, & Montserrat Castelló<sup>2</sup>

<sup>1</sup>ESADE Business School, Ramon Llull University, Spain

<sup>2</sup>Graduate School of Psychology Blanquerna, Ramon Llull University, Spain

Until very recently, Ph.D. students in Spain faced the formation as researchers and research writers with the sole support of their dissertation director. In order to help students publish a research paper in an impact-factor journal, one of the requirements to be fulfilled during their doctoral studies, the Graduate School of Psychology Blanquerna implemented in 2010-2011 the course "How and where to publish" aimed at providing students with the necessary support to write their research papers.

This paper will present the results obtained in a qualitative study of the cases of five students who produced a sufficiently elaborated version of their research paper. The aim of the study was to identify traces of expansive learning (Engeström & Sanino, 2010) during research article writing regulation.

Data taken into consideration were: drafts of their research article (between three and four for each student), questionnaires in which they reflect upon the feedback received from their 1st and 2nd drafts, audio recordings of the discourse and discussions developed in all face to face sessions and semi-structured interviews we conducted at the end of the course.

Texts were analyzed looking for relationships between reviewers' comments and subsequent changes in the drafts. The rest of data were analyzed following the Grounded Theory rationale (using Atlas.ti software). All students' statements were interpreted, coded, and grouped into categories related to the dimensions established by Activity Theory as useful to examine the concept of expansive learning (Engeström, 2001): (1) Who are the subjects of learning, how are they defined and located? (2) Why do they learn, what makes them make the effort? (3) What do they learn, what are the contents and outcomes of learning? and (4) How do they learn, what are the key actions or processes of learning.

Results allowed us to distinguish two major groups of tensions that students confronted during their learning process. These tensions were related to the efforts to construct their authorial identity and the way they conceive the texts. In both cases, conflicts manifested in two dimensions: one referred to what students declare about themselves and about texts; the other which could only be found by inferring it from their practices, actions and texts, therefore being more implicit.

✉ ana.inesta@esade.edu

## **The influence of the “old” German way of academic writing on the “new” international one**

Esther Breuer

Cologne University, Germany

Over the last few years, the German approach to academic writing has changed considerably. Whereas in the past, the “Teutonic” approach (Galtung, 1981) was defined by a lack of continuity, by digressions and by repetitions, today, academic writing in Germany is expected to be linear, absolutely coherent and free of inessential ‘extra information’ (Clyne, 1994; Thielmann, 2009). That is, there has been a shift in German academic writing from the Teutonic to the “Saxonic” or English academic style. Due to the growing internationalisation of academia, students are expected to know and apply this English approach to academic writing – not only when they write in English, but also in their L1 German.

However, in many cases, German students are not explicitly taught how to write academically; rather, this is often a learning-by-reading process. Since they are given no guidance, students have to generate a model of the academic genre on their own, and because they generate their academic genre with the help of both Teutonic and Saxon-style models, some of them are left in a state of “intra-genre”.

In order to analyse the effects of intra-genre on student writing, a study was conducted at Cologne University in which ten German students of English philology wrote academic essays in German and English under laboratory conditions. These essays were then analysed in terms of their conformance to the Saxon academic genre. Text passages were evaluated both linguistically (morphology and syntax) and rhetorically (rhetorical structures, e.g. thesis, antithesis, evaluation, argument, etc.). It was found that the influence of the Teutonic academic genre could be found in all essays – be they written in the L1 or the FL. The presentation will give examples of these influences and attempt to explain them.

✉ [ebreuer1@uni-koeln.de](mailto:ebreuer1@uni-koeln.de)

## **First-year writing at Dartmouth: Students' rhetorical flexibility**

Christiane Donahue<sup>1</sup> & Sara Chaney<sup>2</sup>

<sup>1</sup>Dartmouth College, US & Théodile-CIREL, U. Lille III, France

<sup>2</sup>Dartmouth College, US

We implemented a study of first-year university student writing in 2009-2012 at Dartmouth's Institute for Writing and Rhetoric (Hanover, NH, USA). The primary objective was to learn about the writing knowledge and know-how that students transferred from a first required writing course to a second one, as well as what their general first-year experience in writing at the university was. A secondary objective was to engage faculty who teach writing but do not usually do writing research, in order to develop their ability to step back from their practice and see student texts in a very different light.

The study is theoretically grounded in the literature on knowledge transfer (including Alexander and Murphy 1999; Bereiter 1997; Bransford and Schwartz 1999; DeCorte 1999; Ford 2004; Gick and Holyoak 1983; Guile and Young 2003; McCutchen, Teske, and Bankston 2008; Salomon and Perkins 1987; Sternglass 1998; Tuomi-Grohn and Engestrom 2003), in particular on notions of affordance (Gibson 1977; Volet 1999; Hatano and Greeno 1999; van Lier 2004) and developing writers' rhetorical flexibility.

The study of a stratified random sample of 700 student essays from the start and finish of each writing course described source use, presentation and structure of the argument, kinds of evidence in use, essays' introductions and conclusions, and their overall purpose. Faculty trained to code the essays achieved between 77% and 100% agreement on identification of the features being studied.

Quantitative data were analyzed for patterns across course sequences; case studies followed particular students across two or three courses. Results were cross-referenced with student responses to a survey about their writing experiences in the first-year curriculum.

I will present selected study results suggesting that students do develop rhetorical flexibility in their reuse and transformation of some aspects of writing knowledge gained in the first course. I will also discuss how the study served as faculty development in our writing program. The discussions during the norming sessions, for example, were a rich source of faculty development as faculty from different disciplines and backgrounds learned about colleagues' understanding of various features and of expectations for evidence or methods of source integration.

✉ [christiane.donahue@dartmouth.edu](mailto:christiane.donahue@dartmouth.edu)



## **Changes in the management of writing processes between Grade 3 and adults**

Thierry Olive, Monik Favart, & Charlène Ménard

University of Poitiers & CNRS, France

When writing a text, children have to juggle extremely resource demanding processes within the limits of working memory (Swanson & Berninger, 1994; McCutchen, 1996). With practice and development, however, attention is gradually freed up from the lower-level process of transcription, and can be devoted to the higher-level processes (Berninger & Swanson, 1994; Bourdin & Fayol, 1994; Olive & Kellogg, 2002). From grade 7, planning and translating can then be more efficiently coordinated in working memory. In this framework, this study investigated changes in the management of writing processes in 3rd-, 5th-, 7th-, 9th- graders and adults. Specifically, we focused on the respective contributions of the high and low-level processes in the management of writing.

Participants composed a narrative text, which involved the low and high-level writing processes. They also dictated a narrative to an adult writer, a task, which involved only the high-level processes of writing (planning, text generation and revising), and they performed the Alphabet task to assess their low-level handwriting skills (Berninger & Rutberg, 1992). Participants also performed a secondary reaction time task during writing and dictating (Olive, Kellogg & Piolat, 2002).

For both writing and dictating, we measured fluency (number of words per minute) and cognitive effort (reaction time to the secondary task). We also measured participants' handwriting skills with the Alphabet task, and their working memory capacity with the letters - numbers sequence subtest of the Wechsler Intelligence Scale for Children IV (Wechsler, 2005).

As expected, through grades, handwriting skills, working memory capacity and writing fluency improved, cognitive load of writing decreased, and cognitive load and fluency of dictating remained stable. Multiple regression analyses showed that low-level processes contributed to writing fluency in grades 5, 7 and 9 and gradually gave way to a contribution of high-level processes in grade 9 and adults. This pattern was not observed for the cognitive effort of writing, which was not determined by low level processes at any grade level but by high-level processes in grades 3, 5 and adults.

✉ [thierry.olive@univ-poitiers.fr](mailto:thierry.olive@univ-poitiers.fr)

**Modeling written composition in Grades 4-9:  
The contribution of transcription and self-regulation to text generation**

Teresa Limpo & Rui A. Alves

University of Porto, Portugal

Accordingly to the simple view of writing, text generation depends on transcription and executive self-regulation skills (Berninger & Amtmann, 2003). The present study aimed to provide further evidence of the relationship between transcription (handwriting and spelling), self-regulation (planning, revision, and self-efficacy), and text generation (story and opinion essay quality) across development. A model with direct paths from transcription to text generation and to self-regulation, and from self-regulation to text generation was tested at intermediate (Grades 4-6;  $N = 171$ ) and middle grades (Grades 7-9;  $N = 205$ ).

The results of multiple-group structural equation modeling indicated an adequate fit of the model to the data at both grade-levels,  $\chi^2 (96, N = 376) = 213.31$ , CFI = .92. RMSEA = .057. At intermediate and middle grades, transcription and self-regulation explained 31% and 61% of the variance in text generation, respectively. No differences were found between intermediate and middle students regarding the contribution of transcription to text generation (respectively,  $\beta = .44$  vs.  $\beta = .34$ ) and the contribution of transcription to self-regulation (respectively,  $\beta = .49$  vs.  $\beta = .57$ ). Notably, the impact of self-regulation on text generation was lower at intermediate than middle grades (respectively,  $\beta = .19$  vs.  $\beta = .53$ ). In sum, while transcription is critical for writing and self-regulation in Grades 4-9, self-regulation only interferes with text generation in Grades 7-9. These findings suggest that, throughout development, transcription automatization freed up cognitive resources for self-regulation. Still, only middle graders were able to appropriately use these high-level skills at the service of text generation.

✉ [tlimpo@fpce.up.pt](mailto:tlimpo@fpce.up.pt)

## **The importance of oral language skills for component writing skills in 7-9 year old children**

Chloë Bate, Joy Stackhouse, & Mick Perkins

University of Sheffield, UK

Little research has looked at explicit links between oral language and writing (Shanahan, 2006). This presentation aims to explore the relative importance of different oral language skills to component writing skills, in mainstream UK school children between the ages of 7 and 9.

Fifty-four 7-8 year old monolingual children completed a written narrative task, as well as measures of phonological awareness, non-word repetition, expressive language (word structure, formulated sentences and recalling sentences), receptive vocabulary, oral narrative, reading, spelling and non-verbal ability at the end of year 3 and again a year later. Written narratives were analysed according to six different components, based on the UK National Curriculum assessment focuses for writing: phonics and spelling; handwriting; sentence structure; punctuation; text structure and organisation; and composition and effect.

At the end of year 3, path analyses showed spelling to be a highly significant contributor to writing and accounted for the most unique variance to all six writing components. Expressive language contributed significantly to the sentence structure, punctuation and composition and effect components. Data from the end of year 4 show the continued importance of spelling, being a highly significant predictor to all six writing components. However, the significant influence of language came from the oral narrative tasks, as opposed to the expressive language tasks as in year 3. As would be expected, phonological processing was a highly significant predictor of spelling in both years.

These results confirm the influence of spelling and phonological processing constraints on writing performance at this age. However, they also highlight the importance of developing syntactic complexity orally to develop children's sentence structure, punctuation and composition skills in writing. The importance of oral narrative in year 4 seems to support a developmental model, in which children move from focusing on sentence to discourse level skills.

These findings have implications for the role of oral language in relation to developmental models of writing. The longitudinal data add to our understanding of how the relationships between oral and written language change over time and how particular oral language skills may support writing development within an educational setting.

✉ c.bate@sheffield.ac.uk

## **Subcomponents of writing literacy: Cognitive and linguistic predictors of 5th and 9th graders' text quality across report, instruction, and argument**

Joachim Grabowski<sup>1</sup>, Michael Becker-Mrotzek<sup>2</sup>, & Matthias Knopp<sup>2</sup>

<sup>1</sup>Leibniz University Hanover, Germany

<sup>2</sup>University of Cologne, Germany

This is a report of an interdisciplinary research project at the interface of psychology, linguistics, and instructional science. The complex ability of text production comprises of many different cognitive, linguistic, and motivational subcomponents. Rather than looking for genre-specific skills, we strived to identify overarching subcomponents of writing literacy, concentrating on skills that are compatible with linguistic and psychological insight: (a) the ability to adopt a partner's conceptual, spatial, and/or emotional perspective, (b) the ability to create and understand coherence, and (c) adequate vocabulary knowledge. These subcomponents - together with measures of general cognitive and linguistic abilities - were indicated through a variety of instruments, including standardized tests, reaction time tasks, picture sorting tasks, multiple choice items, and full-text production. Data collection has been conducted in a laboratory setting in the schoolhouse and took between four and five lesson units for each student.

Complete data sets were obtained from  $n=277$  (154 male, 123 female) students of 5th ( $n=146$ ) and 9th ( $n=131$ ) grades from three different school types (higher, medium, and lower level of overall achievement). Two strategies of analysis were applied: (1) Two-way analyses of variance showed strong and statistically highly significant main effects of grade and school type for almost all variables, including general predictors, subcomponents of writing literacy, and text quality ratings (according to NAEP Writing Assessment). (2) Correlational analyses, regression analyses, and structural equation modelling were performed in order to find the abilities and subcomponents that best predict the quality of reports, instructions, and argumentative texts. Here, it turns out that for 9th graders, text quality can be generally better predicted (between 45 and 52 per cent explained variance) than for 5th graders (between 13 and 35 per cent), and intercorrelations between the text quality of the three considered genres are higher in 9th grades ( $r > .50$ ) than in 5th grades ( $.30 < r < .50$ ).

We will report on the detailed prediction paths of text quality, and sketch out an intervention study that will follow in order to investigate whether the training of relevant subcomponents of writing literacy will transfer to text quality across genres.

✉ grabowski@psychologie.uni-hannover.de

## **Symposium**

### **Developing Understandings of Writing Poetry in Diverse Educational Contexts**

Anthony Wilson

University of Exeter, UK

The aim of this symposium on teachers' beliefs, knowledge, practices and experiences regarding poetry writing is to present findings from recent research from New Zealand, the United States and England. Research exploring teachers' views on poetry writing instruction suggests that for some it remains a problematic and even difficult area of the curriculum (Benton, 1986, 1999, 2000; Mathieson, 1980; Wade and Sidaway, 1990; Sedgwick, 1988 and 1990). Wilson (2010) has shown that in different contexts including Canada, Australia, New Zealand and the United States, poetry writing enjoys a 'mixed status' within state and national writing curricula. Furthermore, as Benton's research in England indicates (1999, 2000) there is a gap between the status given to poetry by teachers who perceive its potential and that implied by its presence on the unassessed margins of the writing curriculum.

This symposium will present possibilities for new thinking about teachers' perceptions of poetry writing instruction. Findings from different but interlinked contexts are presented in each paper:

- Paper 1 examines the distinction between 'using poems' and 'teaching poetry' through the lens of found poetry in a multicultural context, which legitimises cut and paste techniques as elements of literacy practice.
- Paper 2 investigates the experiences of pre-service teachers participating in 'author out' writing workshops, with a particular focus on the impact of the social setting on changes in participants' poetry writing and their discourse about it.
- Paper 3 analyses the paradoxical beliefs held by some teachers about the role of literary and linguistic metalanguage in teaching poetry writing.
- Paper 4 raises the question of 'effective' poetry teaching. It explores the issue of teachers' subject knowledge, with specific emphasis on the relationship between reading and writing poetry, and discusses the impact of this on confidence to teach poetry in a context where it is not explicitly valued.

There is synergy between all of these papers both in terms of the focus of their enquiry and in their drawing on a range of theoretical perspectives with which to critique and develop new practice. Papers 1 and 2 are both concerned with the impact of different socio-cultural settings upon learners when they write poetry; Papers 3 and 4 explore the issue of teachers' subject knowledge and its interrelationship with confidence in the writing classroom. Underpinning all of these papers is the question of how far teachers 'use' and model poetry writing with other learners, and what can be said about the influences, both social and cultural, upon the choices

**Wednesday 14:00 – 16:00**

*Room 249 – Symposium*

*Developing Understandings of Writing Poetry in Diverse Educational Contexts*

that teachers make when writing takes place. As Hanauer (2010) has argued, this symposium implicitly takes the view that the conceptual distancing between poetry and research is unnecessarily artificial and based on a misunderstanding of poetry as a genre and investigative practice. This symposium therefore seeks to build on established models of writing research to offer fresh perspectives and insights from international scholars conducting poetry writing research.

**Discussant**

Judy Parr

University of Auckland, New Zealand

## **Finding poetry writing in the New Zealand English curriculum**

Sue Dymoke

University of Leicester, UK

This paper draws on data collected in 2011 in Auckland, during comparative research on the teaching of poetry in secondary schools in New Zealand and the UK. The sample consists of: 13 English teachers and their classes in 3 contrasting Senior schools from multi-culturally diverse communities; 18 Auckland-based English teachers; 50 pre-service English/Media teachers and 2 teacher educators. Using a qualitative, poetic inquiry methodology (an emerging and widely acknowledged method explored by Richardson 2000; Faulkner 2005 as cited in Hesse-Biber and Levy 2008; Ward 2011 and others) the paper considers findings from classroom observations, field notes, semi-structured interviews and desk study of examination-related documents. These findings, analysed through numerous re-readings and systematic coding (consistent with poetic inquiry reporting methods) are re-presented in found poetic form.

The paper locates opportunities for poetry writing within an English curriculum where the noose of assessment (Locke 2010) has squeezed poetry's throat. It comments on the extent to which culturally responsive (Gay 2010; Sleeter 2011) approaches to poetry writing are favoured and modelled by teachers before focussing specifically on found poetry. Results indicate that this is a very popular subgenre in the sample schools. The paper considers the nature of found poetry, in which writers are able to 'rehouse found language in poetry' (Green 2010:113). It analyses its popularity in a Standards-oriented English curriculum where poems appear to be 'used' rather than poetry 'taught'. It explores Green's questions about how writing a found poem can: place a new emphasis on word selection; raise questions about what constitutes a poem, and generate new responses to old texts. The paper investigates teachers' reasons for using found poetry in their classrooms. These reasons pertain to issues of: accessibility; reduction of the 'fear' associated with writing poetry; intertextuality and the evident appeal of found poetry for young writers as 'producers' (Bruns 2006), reared within a world where cut and paste and mash-ups of many different text types are every day experiences. The methods used in analysing the data and writing this paper themselves serve to illustrate the selection and organisation processes that are central elements of written found poetry.

✉ sd100@le.ac.uk

### **Preservice teachers' participation in "author out" poetry writing groups**

Laura Apol, Janine Certo, & Kati Macaluso

Michigan State University, US

Informed by genre conceptions inspired by Bakhtin (1986), where text is constructed relative to social practices, this study explored preservice teachers' (PTs) perceptions of participating in a peer writing workshop model: the "author out" approach (AOA), where the writer is a silent observer of the conversation about his/her poem. Seventy-five elementary English Language Arts majors across three sections of a course entitled "Reading, Writing and Teaching Poetry" participated in four AOA workshops in the semester in which they were enrolled. Research questions included: 1) What are PTs' perceptions of the role that AOA workshops play in the development of their skills and identities as writers of poetry? 2) How, if at all, does the format of the AOA inform PTs' metalinguistic knowledge about the writing of poetry?

Scholars like Murray (1968), Elbow (1973), and others have long advocated the use of writing groups. Our study extends writing group research (e.g. Bruffee, 1978; DiPardo & Freedman, 1998; Emig, 1979) in that it: 1) occurs in the context of a genre-specific *poetry* course; 2) relies on a workshop approach that includes removing the writer's interpretive control.

The primary data source included four 500-word reflections from all PTs about their experiences in the workshops. Secondary data sources, obtained from one third of the sample, included: 1) pre- and post-course interviews; 2) PTs' poems (and drafts); and 3) a 4-5 page paper in which PTs detailed their poetry writing processes/practices. Drawing on Hatch's (2002) inductive analysis model for analyzing qualitative data, we conducted a thematic content analysis by identifying patterns, coding data, and categorizing findings (Miles & Huberman, 1994, 2002).

Findings included that 1) PTs believed AOA writing workshops helped them revise their own poetry; 2) the format of the AOA allowed PTs to improve their "faculty of judgment" (Bruffee, 1978) as well as their skill recognizing, referencing and employing poetic elements in both writing and reading poetry; and 3) through the AOA, PTs developed sophisticated metalinguistic knowledge of the *relationship between* writing and reading poetry. Throughout, preservice teachers recognized the ways they occupied "both sides" of language—as writers (and readers) of poetry.

✉ apol@msu.edu



## **Ways with words: Teachers' beliefs and pedagogical practices in the use of metalanguage to teach poetry**

Anthony Wilson & Debra Myhill

University of Exeter, UK

This paper demonstrates how teachers' pedagogical beliefs and practices about the value of metalanguage in the teaching of poetry is ambivalent and at times contradictory. Teachers in England have been encouraged to develop students' metalinguistic understanding through explicit teaching of grammar. Explicit knowledge is defined as 'knowledge that can identify and account for connections and distinctions between different examples of usage, enhance reading and improve writing' (QCA 1998:20). The goal of acquiring such metalinguistic knowledge is to develop a repertoire of tools for writing: the ability 'to control and manipulate the material at hand' is more significant than the ability 'to describe a linguistic feature using grammatical terminology' (Van Lier 1998:136). With the teaching of poetry, however, the metalanguage includes both linguistic and literary metalanguage.

The data for this paper is drawn from a nationally-funded study investigating the impact of contextualised teaching of metalanguage on students' writing and metalinguistic understanding. The research design comprised a randomised controlled trial and a complementary qualitative data set. The qualitative study involved lesson observations of 32 classes being taught three units of work on writing narrative fiction, argument and poetry. One observation was conducted for each unit of work, giving a total of three observations per class, and 96 observations in total. After each observation the class teacher was interviewed to investigate his/her beliefs about teaching writing and to probe the pedagogical decisions made in the lesson. A student from each class was also interviewed to elicit their metalinguistic understanding and the linguistic choices made in their writing. It is the latter interview set which informs this paper.

Preliminary findings indicate that teachers:

- are less confident teaching the writing of poetry than narrative fiction and argument;
- hold paradoxical beliefs about the role of literary and linguistic metalanguage in teaching poetry writing;
- often use literary language formulaically or 'uncreatively', rather than as a guide to aid learners playing with language;
- are confident with literary terminology but fearful of linguistic terminology;
- articulate and reveal a lack of confidence in subject knowledge which shapes their view of the value of metalanguage.

✉ [a.c.wilson@exeter.ac.uk](mailto:a.c.wilson@exeter.ac.uk)

## **Teachers' personal and professional interests in poetry: Exploring the distinction**

Andrew Lambirth

University of Greenwich, UK

This paper sets out to explore correlations between teachers' personal interests in poetry outside the context of their professional environment and the quality of teaching the writing of poetry in the classroom. Literacy research indicates an apparent link between the personal interest of teachers in specific literary activities and children's interest and self-motivation as learners in school in these activities (Morrison et al., 1991; Bisplinghoff 2003, Drehar 2003; Commeyras, Bisplinghoff and Olson 2003). Rummel and Quintero's (1997) case studies of teachers, suggested that teachers' lives and classroom practices were strongly influenced by their pleasure in literature, which nurtured both them and their pupils. The data from two studies begins to explore these conclusions.

This paper reports on the results of two qualitative research studies that explored questions of Primary school teachers' personal interest in poetry; knowledge of poems and poets and their ability and confidence to teach poetry in the classroom. The *Leading Poetry* Project drew on in-depth interviews with ten primary school subject leaders about their perception of the teaching of poetry in their schools. The *Poetry Champions* project worked with five teachers over a year and sought to develop their ability to teach poetry in primary classrooms in London. Data from interviews and teachers' journal entries were collected and analysed. Can teachers who do not read or write poetry at home for pleasure be effective teachers of poetry? The data indicate that the distinction, which is often drawn between personal and professional pleasures, may distort the conclusions, which correlate personal interests in literature with the potential to teach it effectively. The teachers in this study found pleasure from teaching poetry to children in school. A synergy was found between professional and personal pleasures, which appeared to positively influence the confidence to teach it well.

✉ A.Lambirth@greenwich.ac.uk

## **Writing and identifying errors in a faulty procedure as an effective method for learning in VET**

Elena Boldrini, Alberto Cattaneo, & Elisa Motta

Swiss Federal Institute for Vocational Education and Training, Switzerland

In Vocational Education and Training, teaching and learning professional procedures assumes a peculiar importance. A central question is how to teach a professional procedure in a scholastic context. To answer this question, two main assumptions can be made: a) video recordings of professional situations can be a valid support for teaching procedures (Arguel & Jamet, 2009); b) written identification and analysis of errors can be a powerful means to lead to a deep understanding of procedures (Siegler, 2001). Our hypothesis is that the written identification of errors in a video showing a faulty procedure would foster a better understanding of the procedure itself, than a) a non-written identification and b) a written description of the procedure having just seen a video showing its correct management. These hypothesis have been tested in a 2X2 study, involving 200 apprentices, in 4 conditions: written vs non-written identification and analysis of errors in a faulty procedure shown in a faulty video; written vs non-written identification and analysis of correct indices of a correct procedure shown in another video. The “writing conditions” were expected to outperform the “non-writing” ones in i) the quality of the final written description of the complete and correct procedure, ii) the score in a pre-post test concerning the correct management of the procedure, iii) in a questionnaire about apprentices’ satisfaction and perceived usefulness with the learning activity.

i) Considering the number of elements correctly identified in the final description, the writing conditions have a higher mean than non-writing ones. We ran a linear regression which showed a significant main effect of writing ( $\text{Beta} = .347, p < .001$ ); besides, correctness is significant given non-writing ( $\text{Beta}=.188, p<.01$ ), while there is no significance of the correctness given writing ( $\text{Beta} = -.038, p > .05$ ).

ii) Pre-post quiz about the procedure shows a significant score increase in all conditions, exception made for the non-writing condition on correct procedure.

iii) Questionnaire on apprentices’ perceived satisfaction and usefulness about the activity reveals that the writing conditions outperformed the non-writing ones and that writing on an incorrect procedure obtained the highest score.

✉ [elena.boldrini@iuffp-svizzera.ch](mailto:elena.boldrini@iuffp-svizzera.ch)

## Professional text genres: Writing standards in vocational education

Winnie-Karen Giera & Astrid Neumann

Leuphana Universität Lüneburg, Germany

Our time of globalization and the linked differentiation of division of labor strongly influence the area of writing, especially in professional life: work-related correspondence, knowledge about and the ability to produce various text genres in different media have become increasingly important. Teaching and learning these competencies is one of the central aims of vocational schooling (see Neumann, 2011), even though a basic level of text competence can at the same time be considered a hidden precondition in order to enter this educational phase in Germany (Bundesagentur für Arbeit, 2009). Similar contradictions can be found with respect to the amount and content of teaching: the extent of productive and receptive genre instruction in secondary schools strongly differs from trainee's knowledge about professional texts required in vocational education. Considering these aspects, we assume an observable imbalance between the text genres relevant for professional education and their didactic consideration in vocational and secondary schooling.

The studied sample were 27 programs for binary qualified jobs of the Chamber of Industry and Commerce of Lüneburg-Wolfsburg. Relevant text genres were identified through detailed document analysis of curricula and written examinations from summer 2010. In addition, curricula of German in secondary schools were examined in order to compare the professional writing standards with those of general secondary schooling. Categories were developed to code the data and conduct descriptive statistics.

First analysis show a broad variety of professional genres such as legislative texts, training contracts, offers, tarifvertrag and regulations to be relevant in the context of professional education whereas the range of productively (e.g. offers, calculations and confirmations) or receptively (e.g. legislative texts) taught genres seem to differ or to be considerably lower. Teaching in secondary schools seems to be focused not so much on these professional genres, but rather on transfer-texts such as applications, curriculum vitae and reports (Giera, 2011).

These results provide empirically based insights into relevant professional genres for the binary vocational training, thereby indicating aspects of further research in the field of text linguistics as well as for curricular and didactic discussions in order to improve trainees' writing competencies in the course of professional education and practice.

✉ winnie-karen@gmx.de

## Professional writing from multiple sources

Mariëlle Leijten<sup>1</sup> & Luuk Van Waes<sup>2</sup>

<sup>1</sup>Flanders Research Foundation - University of Antwerp, Belgium

<sup>2</sup>University of Antwerp, Belgium

Previous writing research has lead to various well-known writing process models. However, these models are primarily based on observations made in educational environments and relate to single texts. Professional writers in the workplace on the other hand often use multiple (digital) sources to successfully write their business texts. Writing a business text, e.g. a report for a merger, is a very complex activity during which a wide variety of sources are consulted. This project, therefore, addresses the following research question: What characterizes the writing processes of professional writers 'designing' business texts from multiple (digital) sources?

In this research project (2010-2013) we describe the activities of writing professionals when writing in their organisational setting (via keystroke logging and participative observation). In this stage, we have gathered a variety of writing process data, ranging from proposals to tweets.

The writing process data are collected with Inputlog. Inputlog is a keystroke logging program that registers an identification of every activated window environment (e.g. program, document, or web page) which is very important for the source analysis.

During the presentation we describe the main concepts of this research project via case studies: the use of multiple sources, the implications of sources on the fragmentation and fluency of the writing process, and we will end with an example of a linguistic analysis of the data.

To show the complexity of professional writing we have, for instance, transferred the Inputlog data to a network analysis program (Pajek). A network analysis shows the relative time spent reading/writing the different sources and the direction/quantity of the transitions between the sources when producing a text. In one of our cases (a project proposal that took 10 hours to produce), we observed that this writer on average switches 5 times per minute between documents and programs and that he spends about 75% of the time consulting other (re)sources while writing.

The conclusions will be related to the existing writing models. Especially the decision process a writer needs to make to either retrieve information from the long term memory or consult an external (re)source seems to be an important aspect that influences the organisation of the writing process.

✉ [marielle.leijten@ua.ac.be](mailto:marielle.leijten@ua.ac.be)

**Aspects of language that influence the acceptance of comments and suggestions  
made by peers in the process of academic writing**

Djuddah A. J. Leijen<sup>1</sup> & Äli Leijen<sup>2</sup>

<sup>1</sup>Department of Estonian and General Linguistics, University of Tartu, Estonia

<sup>2</sup>Viljandi Culture Academy, University of Tartu, Estonia

Research investigating the effectiveness of online peer feedback on the academic writing process has focused on a large variety of variables that have been determined to either support, or obstruct the writing process. As a result different models, and tools are proposed to support the online peer feedback process. One such model, proposed by Nelson and Schunn (2009), suggests that peer feedback is most effective when solutions are offered, the location of the problem is given, and a summary is included; however, peer feedback is hindered when explanations of the problem is given. Most peer feedback models do not specifically take linguistic features, used in the act of communication between peers, as a variable effecting implementation. This study investigates, firstly, if certain linguistic features of peer feedback: e.g. the use of mitigating devices, use of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> person perspective, length of feedback, etc., influence implementation and, secondly, whether the inclusion or exclusion of features will allow us to predict implementation or not. A corpus of peer feedback was compiled using data collected in an introduction to academic writing course using an online peer feedback tool SWoRD (Scaffolded Writing and Reviewing in the Discipline). The corpus consists of 292 peer feedback reviews (in varying length and between 13 L2 students each writing a single essay in three drafting rounds). Logistic regression was used to investigate which of the selected features influence a student's choice to implement suggestions and/or comments. The results of the Logistical Regression Analysis on training data resulted in a feature model containing four features that were tested for its predictive strength on testing data using precision and recall. The findings indicate that the number of comments included, the 3<sup>rd</sup> person perspective, the average length of words in sentences, and idea verbs in the feedback seem to influence implementation of peer feedback. Further research on a larger corpus is needed to verify and extend on the findings of the current study. In addition, further studies could expand the analysis of linguistic features to contain additional principles of politeness, a deeper analysis of the various usages of mitigation and modality in peer feedback, as well as culture specific communication patterns, and differentiating between native and non native speakers of English.

✉ djuddah.leijen@ut.ee

## **Regulation Episodes in expert research article writing: An integrative unit of analysis**

Anna Iñesta<sup>1</sup> & Montserrat Castelló<sup>2</sup>

<sup>1</sup>ESADE Business School, Ramon Llull University, Spain

<sup>2</sup>Graduate School of Psychology Blanquerna, Ramon Llull University, Spain

This paper will present a study that attempts to approach writing regulation from an integrative perspective, taking into account its social and cultural nature. In order to do that, we used a new unit of analysis, the Regulation Episode (Zanotto, 2007; Castelló & Iñesta, 2007; Castelló, Iñesta & Monereo, 2009; Iñesta 2009), which we consider as the sequences of actions that authors strategically implement with the objective of solving a difficulty or challenge identified during the writing process.

Data come from a study which analyzed the process followed by two experienced researchers in the field of psychology when writing a research article in Spanish as their academic writing L1 in co-authorship conditions. For the purpose of research, Writer 1 and Writer 2 accepted to work separately on the whole article to compare their versions and negotiate a joined one for submission. Writer 1 devoted 660 minutes distributed in 11 sessions to write the research article while Writer 2 devoted 1016 minutes distributed in 12 writing sessions.

Results obtained confirmed the existence of Explicit Regulation Episodes in the writing process of both participants, which were found to be either continuous (challenge and solutions are cited and implemented in one same writing session) or discontinuous (challenge and solutions are cited and implemented in different writing sessions). Finally, micro-level analysis showed evidence of intentional challenge resolution that had not been explicitly identified by the writers. We considered this to be evidence of implicit Regulation Episodes, which we defined as those sequences of actions of at least 10 bursts, some of which are aimed at reformulating or adjusting various elements of the sentence, showing an intention to address a challenge, despite not having made any explicit reference to it during the writing process. Examples of these two kinds of Regulation Episodes will be shown in the session.

✉ [ana.inesta@esade.edu](mailto:ana.inesta@esade.edu)

## **Experiencing supervision: Two case studies of master's dissertation writers**

Nigel Harwood & Bojana Petric

University of Essex, UK

While there have been a number of valuable longitudinal studies of the development of L2 writers' academic literacy (e.g. Casanave 2002; Leki 2007; Prior 1998; Spack 1997; Sternglass 1997), the focus of the present talk is on both students and supervisors, reporting the experiences of two students and their supervisors in different disciplines as the students tackled their MA/MSc dissertations at a UK university. Although we know something about L2 students' experiences of supervision (e.g. Kruse 2007), for the purposes of this study and to provide a richer picture, the students' supervisors' perspectives were also sought. We charted the students' progress with their dissertations from the initial proposal to the finished product. Using a multiple case study approach (e.g. Duff 2008; Merriam 1998), we interviewed students and their supervisors about the supervision, analyzed students' drafts and final dissertation chapters as well as their supervisors' comments and feedback on this writing, as well as the markers' reports on the final dissertations. In addition, we examined supporting materials provided by the students' departments (e.g. handbooks, dissertation writing guidelines, assessment criteria), had students compose think-aloud protocols as they drafted parts of their dissertations, and compile writing logs, providing details of students' reading and composing.

In this talk we will focus on two student-supervisor pairs, in two different departments, which illustrate contrasting learning outcomes of master's dissertation writing: a successful student, who received a distinction for her dissertation, and a student whose dissertation project failed. We identify factors and issues in these two students' dissertation writing processes, which impacted upon their different outcomes, and we analyse the role of supervision at different stages of dissertation writing, from both the students' and the supervisors' perspectives. While we do not wish to suggest that there is a direct causal relationship between supervision and students' academic success, we argue that the varying supervision practices we encountered across the university, together with supervisors' contrasting attitudes towards their supervisory role and students' differing expectations of their supervisors, have potentially profound implications for students, supervisors, and university policy makers.

✉ [nharwood@essex.ac.uk](mailto:nharwood@essex.ac.uk)



## **Next-generation feedback: The effectiveness of oral screen-capture response to students' writing**

Chris M. Anson, Deanna Dannels, Dana Gierdowski, & Meagan Kittle-Autry  
North Carolina State University, US

Writing scholars have long argued that response to students' writing is central to their development. Voluminous research has analyzed the number, types, style, focus, and pragmatic force of teachers' marginal and end comments, the underlying developmental models it conveys, and the balance of praise and criticism. But little scholarship exists on oral response. Sociocultural views suggest various entailments for each mode, especially in the way that oral communication about writing reflects both individual perspectives on literacy development and socially determined educational practices through which roles and identities are expressed and negotiated. As new technologies develop that allow digitally captured voice responses to students' writing, research is needed to understand the effects of these response media on students' learning and writing development.

This paper will describe the researchers' investigations of screen capture response (SCR)—a technology that records teachers' voice and text commentary as they scroll through students' digitally submitted papers. Five face-to-face college writing courses and two distance-education content-area courses were studied. Teachers responded to one set of formal papers using conventional written commentary and to a second set using SCR. Online surveys administered to all subjects consisted of Likert scale questions to determine degrees of positive and negative affective response to teachers' comments; interval scale questions to determine other factors including perceived effectiveness of SCR on six dimensions of writing improvement; and open-ended questions. Teachers were audiotaped-interviewed to determine perceptions of the two modes of response. A subset of student was videotape-interviewed to explore their impressions of SCR vs. written commentary, and these included SCR replay episodes. Teachers' comments in both modes were analyzed using the LIWC (Linguistic Inquiry and Word Count) program to compare response as a function of lexis as well as word counts.

To date, the results show that 1) SCR provides significantly more response than written comments in approximately the same amount of time; 2) students self-report significantly higher levels of learning from SCR on all six dimensions of writing; 3) students construct teachers' intentions and identities significantly more positively in SCR than in written response on eight of ten dimensions; and, 4) for a small subset of students, SCR can lead to face-threat that may impede their ability to learn from the response. Implications suggest that SCR is a valuable new technology for enhancing the effectiveness of response to writing, but academic staff must be trained to provide response in this mode.

✉ [chris\\_anson@ncsu.edu](mailto:chris_anson@ncsu.edu)

## **Strategy-focussed writing instruction: Observation alone is sufficient to improve writing in typically developing 6th grade students**

Raquel Fidalgo<sup>1</sup>, Mark Torrance<sup>2</sup>, Gert Rijlaarsdam<sup>3</sup>, & Huub van den Bergh<sup>4</sup>

<sup>1</sup>University of Leon, Spain

<sup>2</sup>Nottingham Trent University, UK

<sup>3</sup>University of Amsterdam, the Netherlands

<sup>4</sup>University of Utrecht, the Netherlands

Strategy-focussed writing instruction (e.g., Graham, Harris and Macarthur, 1993; Torrance, Fidalgo and Garcia, 2007) involves helping student develop explicit metaknowledge about both effective writing processes and the features of good text. A typical strategy-focussed intervention involves several instructional components including direct (declarative) “from-the-front” instruction, observation of teacher modelling, and practice both with peers and alone. Evidence suggests that strategy-focussed instruction is effective in both the short and long term (Torrance, Fidalgo and García, 2007; Fidalgo, Torrance, and García, 2008), and more so than other forms of instruction (Graham and Perin, 2007).

What is less clear is which of the several instructional components typically included in a strategy-focussed intervention are necessary for its success. Fidalgo, Torrance, and Robledo (2011), for example, found that omitting a declarative component did not reduce overall effectiveness. We explored this question with a lagged, cross-panel design involving three intact classes of Spanish 6th Grade students (N = 63). Evaluation proceeded over a total of 18 sessions with assessment probes at baseline and then after every two sessions. All three groups received strategy-focused writing instruction comprising two sessions of, first, observing the instructor modelling effective strategies (thinking aloud while composing in front of the class), then declarative instruction, then practice in pairs, and finally solo practice. Groups varied as to when instruction was delivered with Group B lagging two session (i.e. one instructional component) behind A, and Group C receiving instruction after instruction was complete in groups A and B (who then returned to practice-matched normal curriculum). Text quality was assessed in terms of both holistic and text-analytic ratings.

Our findings suggest that observation alone is sufficient to give substantial and sustained gains in writing performance. This finding was replicated in all three groups and across two different text-types.

✉ rfidr@unileon.es

**Reading and writing during synthesis tasks: Quality of on-line reading and writing processes for 6th grade students. Effects of an intervention programme on processes**

Isabel Martínez<sup>1</sup>, Mar Mateos<sup>1</sup>, Gert Rijlaarsdam<sup>2</sup>, & Elena Martín<sup>1</sup>

<sup>1</sup>Autónoma University of Madrid, Spain

University of Amsterdam, the Netherlands

Reading and writing can be powerful tools for content acquisition. Some studies have shown that the combination of these activities is even more powerful. For this, our interest is focused on the study of “hybrid tasks”.

In previous studies we observed that the procedures students followed during synthesis tasks correlated with the quality of their texts and the level of learning. From this, there is a fundamental question: how to intervene into the procedures to improve the use of reading and writing to learn? Therefore, our goal was to evaluate an intervention on the procedures observed in 6<sup>th</sup> grade students while they wrote syntheses using complementary pairs of history texts.

A quasi-experimental pre-post design with a control group was implemented. The participants were 32 students with high or low initial levels of reading comprehension and prior knowledge. They performed a synthesis for the pre and post-test. Furthermore, all participants made three more syntheses between the pre and post-test. In the experimental group, the researcher applied the program in twelve sessions. Students were trained in selection, elaboration, organization and integration through a gradual transfer of control. The data consisted of video-recording of the pre and post-test. These recordings were coded using a set of mediation, recursiveness and complexity indicators of the activities followed. We created process profiles for each student, showing certain procedures: spent time, number of activities, reviews, backs and forths between source texts and produced text, the first reading of the sources and look up a guide elaborated. These codes were analysed in a mixed models analysis, using group and time as factors.

From the results, the experimental group showed more sophisticated procedures in the post-test. They increased the spent time and also carried out a larger number of different activities. But, moreover, the nature of these activities changed qualitatively: the duration of the interactions increased; some students even returned to the source texts in the final revision and those who started off by reading the texts separately later came to read them together. Finally, within the experimental group, high-level students followed more sophisticated patterns than low-level students.

✉ isabel.martinezalvarez@uam.es

**Improvement of writing skills on 8<sup>th</sup> grade students:  
A study with the SRSD program in Coimbra schools**

José Rebelo, Isabel Festas, Albertina L. Oliveira, Sara Ferreira,  
Maria Prata, & Carla Sousa  
Universidade de Coimbra, Portugal

This paper will present the project “Teaching writing strategies”, supported by FCT (PTDC/CPE-CED/102010/2008), that intends to improve writing skills of students on the 8<sup>th</sup> grade in urban schools of Coimbra. The main goals of the project are to adapt some of the writing strategies of the Self-Regulated Strategy Development (SRSD) developed by Harris, Graham, Mason and Friedlander, (2008). Specifically, the data that will be presented concerns the planning of an opinion essay by the students involved in the project. Thus, the intervention has been carried out to verify the effects of strategy instruction on writing performance in the context of Portuguese Language classes.

In order to implement the study, a quasi-experimental design has been carried out with control and experimental groups and with pre and post-tests.

The study as a whole encompasses six middle schools in the urban area of Coimbra, comprising more than 500 8<sup>th</sup> grade students. However, the data that was possible to obtain up to the present moment came from two schools (one experimental and the other a control school), involving 115 students (63 from experimental group and 52 from control group).

All the teachers from the experimental group participated in instruction sessions, led by the research team, in their own schools to guide them through the whole process of intervention. The research team weekly supported the teachers’ work. The intervention lasted four months, and was delivered by the Portuguese Language teachers who implemented the SRSD in the whole classroom once a week for 45 minutes. A set of five lessons plan have been adapted about planning and writing of an opinion essay from *Powerful Writing Strategies for all Students* (Harris, et al, 2008).

After controlling for parents educational achievement, previous school achievements and gender, the first results, coming from a mixed ANOVA, show significant improvements ( $F = 3,965$ ;  $p < 0.05$ ) in writing opinion essays between the experimental and the control group, meaning that the students from the experimental group have significantly increased their ability to write opinion texts from the pre test to the post test. These findings and other important aspects will be discussed in the conference.

✉ jsrebelo@fpce.uc.pt

**What kind of words is more difficult for Portuguese dyslexic children to spell when compared with same reading-level younger children?**

Ana Paula Vale<sup>1</sup> & José Sousa<sup>2</sup>

<sup>1</sup>Unidade de Dislexia – UTAD, Portugal

<sup>2</sup>UTAD, Portugal

Dyslexia manifests not only by means of word reading deficits but also, and perhaps more persistently, via spelling deficits. Despite this, the vast majority of dyslexia studies have been focusing on word reading and, at least in the context of European Portuguese, spelling data is scarce.

The aim of this study was to examine Portuguese dyslexic 5<sup>th</sup> grade children's spelling skills compared to that of typical same age readers of 5<sup>th</sup> grade and also compared with that of younger 3<sup>rd</sup> grade children with the same reading level. Forty-two children, 14 per group, were individually tested on cognitive and reading and spelling tasks.

The words that are easier to read might not be easy to spell and the other way around. The words used were chosen to represent spelling strategies. They were frequent and were manipulated regarding orthographic consistency and syllabic structure.

The results showed that, comparatively to the same age matched group, children with dyslexia made significantly more errors in all the word categories. When compared with same reading level younger children, the dyslexic children did worse too, but the differences were statistically significant only when the spellings required a deeper lexical orthographic knowledge and knowledge about contextual rules. Overall, the results show that Portuguese dyslexic children, even after five years of schooling, maintain two types of difficulties: phonemic analysis difficulties, although they can learn simple phoneme-grapheme consistent correspondences, and deficits in the elaboration of a more sophisticated orthographic lexicon. In fact, the dyslexic children did not achieve the same level of lexical orthographic knowledge displayed by the younger reading age matched children.

This suggests that the orthographic representations of dyslexic children do not develop satisfactorily even when they had more time of print exposure. Probably, this originates from deficits on the processing mechanisms of integration of phonological and orthographic information.

✉ pvale@utad.pt

**Process of writing stories made up by newly literate students in the school context:  
Dialogism, memory and autonymic modalization**

Eduardo Calil & Cristina Felipeto

Universidade Federal de Alagoas, Brazil

Studies about the writing processes of paired students (Daiute, 1993; Vass, 2002) indicate “contestation” as an important factor in text content creation and structuring. Considering contestation from a dialogical and socio-historical point of view (Bakhtin, 1986), this paper describes some types of comments made by a student about lexical items proposed by her partner during paired fiction writing processes. The nature of this investigation is qualitative and longitudinal. For two years we followed the teacher’s proposals of text production in the classroom. Once a month, we filmed two students (6 to 7 years old) who were good friends and had recently become literate. We adopted ethnolinguistic methodological procedures that respect the environmental conditions (natural context) of the classroom and recorded (videotaped) the students’ dialogue and their writing process in real time. Our *corpus* was composed of 16 proposals of text production (6 filmed in the first year and 10 in the second year of data collection). We identified the occurrence of comments with structures of autonymic modalization (Authier-Revuz, 1995): enunciations in which the pupils return to a term expressed earlier and comment on it, justifying why it could or could not be written in the current text. The autonymic modalizations were not frequent, although both students produced them. Our results indicate that the meta-enunciative characteristic of the comments focuses on specific elements of the narrative, such as story titles, character names and terms related to the characterization of these characters. In addition, we found that the contestation between the students, expressed by the comment that follows the word spoken by the other, highlights the meaning that a term has for each of them. From our point of view, this contestation is related to the dialogical character of speech: to interlocutive dialogism, when the meaning of the word uttered by one speaker is not shared by the other, and at the same time, to the discursive memory of each student, when a word is rejected or accepted as a function of its relationship with other socio-historically constituted discourses.

✉ eduardocalil@hotmail.com

## The impact of oral language skills on lexical diversity in written texts

Kirsty Walter<sup>1</sup>, Julie Dockrell<sup>2</sup>, Vince Connelly<sup>1</sup>, & Sarah Crittten<sup>3</sup>

<sup>1</sup>Oxford Brookes University, UK

<sup>2</sup>Institute of Education, UK

<sup>3</sup>Coventry University, UK

Children with Specific Language Impairment (SLI) experience difficulties when producing written texts. In contrast to skilled writers, children with SLI produce texts of lower quality with fewer words and reduced lexical diversity (Dockrell, Lindsay, Connelly & Mackie, 2007). Research has identified links between limited vocabulary, seen in children with SLI, and poor text quality (Berninger et al, 1992; Dockrell et al, 2007). A reduced number of different words within a text may indicate the writer has a limited vocabulary. Findings to date have been mixed, primarily due to issues with measuring lexical diversity (e.g. Scott & Windsor, 2000; Dockrell et al, 2007). Although many studies have used Type-Token Ratio (TTR), this is significantly associated with text length and fails to distinguish between children with and without SLI (Watkins, Kelly, Harbers & Hollis, 1995). Other measures, controlling for text length typically require longer samples, which is not always possible when studying children with SLI (Jarvis, 2002; Scott & Windsor, 2000). The current study investigated the lexical diversity using Guiraud's Index. Guiraud's Index is an algebraic equation that controls for the text length issues in TTR, and is reliable and valid in primary school aged children (Vermeer, 2000). Thirty-three children with SLI (aged 10:7) and their peers, matched on chronological age (N=33, aged 10:7) and language ability (N=33, aged 8:7) produced written narratives in five minutes. The SLI and language match groups had significantly lower levels of lexical diversity than the chronological age matches. Additionally, lexical diversity was significantly correlated with receptive vocabulary and writing quality. Stepwise regression found that lexical diversity and vocabulary accounted for 49% of the variance in text quality. These results highlight the important contribution of lexical diversity to the production of high quality written texts. Furthermore, the similar patterns of performance between children with SLI and their language age matches suggest developmental delays in writing for children with SLI. Implications for practice and instruction are discussed.

✉ kwalter@brookes.ac.uk

## **A theoretical model articulating writing instruction and grammar instruction**

Marie-Claude Boivin<sup>1</sup> & Reine Pinsonneault<sup>2</sup>

<sup>1</sup>Université de Montréal, Canada

<sup>2</sup>Université du Québec à Montréal, Canada

In this paper, we will present a theoretical model whose object is to integrate writing instruction and grammar instruction. Despite the existence of a body of work on writing and writing instruction on the one hand (Hayes and Flower, 1980; Boyer et al., 1995; Levy and Ransdell, 2009; Beard et al., 2009 among others), and grammar and grammar instruction on the other hand (notably for French Genevay, 1994; Nadeau and Fisher, 2006; Dolz and Simard, 2009, and Haussamen et al., 2003 for English) there has been little research, at least for French L1 instruction, aiming at constructing such a model. Our model relies on some general principles guiding instructional choices, and is built around four main components: modern grammar, the writing process, instructional aspects, and grammatical work.

The key grammatical concepts “text” and “sentence” each have the same importance in the model. They include primitives such as grammatical categories (nouns, verbs, etc.), the notion of phrase, grammatical functions (subject, complement), and the basic sentence model NP VP. The links between “sentence” and “text” are at the heart of the model, in a zone that we will refer to as the interface. From the writer’s point of view, the interface has to do with decisions about the delimitation and the internal organization of sentences.

We assume that the writing process includes planning, translating, and revising. Planning is related to the component text whereas translating and revising are at the interface. This configuration reflects the claim that translating and revising largely draw from the writer’s grammatical resources (grammatical knowledge).

«Instructional aspects» (for example collective planning or peer-revision) are disseminated in the model and associated with other components (in this case planning and revision).

Grammatical work notably includes using syntactic operations (deletion, movement, substitution, addition), as well as the basic sentence model, and is related to all the other components. As a result, it is possible to do grammatical work directly on sentence structure or text organization, and to integrate it into the writing process (planning, translating or revising).

Among the principles acting as guidelines for instructional choices regarding «grammar and writing», let us mention the following: all instructional interventions should take into account the cognitive load of the task, and modeling should be used in all contexts where an overt reasoning would benefit the students.

Although elaborated for French our model could apply *mutatis mutandis* to other languages.

✉ marie-claude.boivin@umontreal.ca



## **Representing gender diversity in writing research**

Susan Jones & Debra Myhill

Exeter University, UK

This is a methodological and theoretical paper that aims to explore how gender has been researched within the different disciplines and research paradigms informing writing research. Against this diverse background the gender of the writer has been seen as a possible determiner in both engagement and success, not least because there has been a constant focus on the under-performance of boys in language based subjects for the past twenty years. The paper will consider this research in the light of the post-modern turn from discourses of difference and disadvantage to discourses of diversity and will argue for gender to be reconfigured as a complex and diverse category rather than as a fixed and essential individual characteristic.

To this end the paper will explore how different research designs have sought to represent this complexity rather than reduce the variables of male and female to two homogenous groups with stable, determined and predictable gender identities that position all boys (or girls) as somehow similar. The paper will consider designs that have looked at how gender intersects with compounding variables such as achievement or social class and in contrast it will consider the contribution made by exploring single-sex cohorts to explore diversity within the categories male and female. Multi-method designs will be considered to show how combining qualitative and quantitative techniques can reveal how similar behaviours might be informed by different motivational and attitudinal influences. The paper will further explore how these different research designs have been taken up within classroom policy and practice and consider how different approaches might variously amplify or challenge gender norms.

The argument being made here is not to suggest that any one tradition provides a panacea for how research into gender and writing should be conducted but that an awareness of each other's traditions and approaches might be mutually beneficial. The claim however is that writing researchers of all traditions should resist the uncritiqued reporting of gender difference data and find better ways to represent gender diversity within their research designs.

✉ [susan.m.jones@ex.ac.uk](mailto:susan.m.jones@ex.ac.uk)

## **The new uses of written language: A distributed analysis**

Thomas Quinlan

The College of New Jersey, US

Over the past 30 years, the use of written language has changed dramatically. In fact, many suspect that we are living through the largest, most rapid expansion of written language in human history. Today, most writing occurs on networked digital devices. Warshauer (2007) points to the empirical and theoretical difficulties of investigating these new uses of written language.

Distributed cognition (Hutchins, 1995) provides a way to address some of these difficulties. This theoretical approach views complex human activities as a “distributed cognitive system composed of a group of people interacting with external cognitive artifacts” (Zhang & Patel, 2006). On this view, individuals interact with one another, as well as with technologies. A distributed analysis focuses on the interaction of representations, both internal (in the mind) and external (Zhang & Norman, 1994).

In a recent chapter, Klein and Leacock (2012) argue that a distributed analysis comports well with influential writing models (e.g., Hayes & Flower, 1980). The authors explain how the distributed perspective might be profitably applied, particularly in examining the writer’s interactions with various external representations, such as a writing assignment, source documents, and the text-produced-so-far. Further, the authors explore the cognitive implications of these interactions.

For writing research, the flexibility of the distributed framework can be useful, by enabling the researcher to investigate the act of writing, in considerable complexity. Notably, the framework readily encompasses the roles of technology and social interactions. This flexibility provides the necessary latitude to examine these relevant dimensions of writing. At the same time, it places additional responsibility on the researcher, to focus the investigation upon the most meaningful interactions. For example, Klein and Leacock focus predominantly on the interaction between the writer and the text-produced-so-far. This focus is appropriate, given that some writing researchers regard this particular interaction as the primary locus of writer cognition (e.g., Bereiter and Scardamalia, 1987; Britton, 1982).

However, other interactions are also important. As applications running on networked digital devices provide new ways of using written language, it has become increasingly important to consider how writers interact with technologies, as well as with readers. To investigate the new uses of written language, that emerged between the 1980s and the present, I applied the distributed cognition framework to the (1) production and (2) sharing of written text. In this

✉ thquinlan@gmail.com



Wednesday, July 11

18:00 – 18:45

Main Auditorium

## EDITORS' ROUNDTABLE

### Is Writing Research Becoming Mainstream?

Writing research is gaining notoriety. Across peer-reviewed journals more and more high-quality writing research is being published. Also, in the last five years an impressive number of writing handbooks have been published. Is writing research becoming mainstream? Come to discuss this with four Editors of leading journals in our field. Moreover, take this opportunity to learn some inside tips and hints on how to polish your paper and maximize the prospects of being published.

#### Participating Editors

**Debra Myhill** (University of Exeter, UK) is the Editor of the journal *Research Papers in Education*.

**Montserrat Castelló Badia** (Ramon Llull University, Spain) is the Editor of the journal *Cultura y Educación: Revista de teoría, investigación y práctica*.

**Gert Rijlaarsdam** (University of Amsterdam, the Netherlands) is the Editor of the *Journal of Writing Research*.

**R. Malatesha Joshi** (Texas A & M University, US) is the Editor of the journal *Reading and Writing: An Interdisciplinary Journal*.

**Wednesday, July 11**

**20:30**

*Guarany Café*

## **WRITERS' DINNER & ROUNDTABLE**

### **Writing & Imagination**

Come to have dinner in an emblematic café of Porto and participate in a lively discussion about the writing process and the topic of Writing and Imagination. Selene Vicente (University of Porto) will moderate the discussion among Portuguese experts representing three crafts of writing: a writer, a literary critic and a translator.

#### **Participating Writers**

**Richard Zimler.** Writer of the acclaimed novel *The Last Kabbalist of Lisbon*.

**Joana Matos Frias.** Scholar and literary critic.

**Helena Topa.** Translator of Günter Grass, Herta Müller and Elfriede Jelinek.

**Thursday, July 12**

9:00 – 10:30	<b>Individual Papers</b> <i>Room 250</i>  <b>Chair: Fidalgo</b>	<b>Individual Papers</b> <i>Room 249</i>  <b>Chairs: Grabowski</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Dockrell</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Chenu</b>
9:00	Braaksma, Rijlaarsdam, & van den Bergh	Alves Martins, Salvador, Albuquerque, & Lourenço	Drijbooms, Verhoeven, & Groen	Negro, Chanquoy, De Cara, & Hazard
9:30	Proske, Roscoe, & McNamara	Drexler, Schneevoigt, & Billmann-Mahecha	Bourke, Davies, & Blanchard	Boivin & Pinsonneault
10:00	Raedts & Rijlaarsdam	Vasconcelos Horta & Alves Martins	Llaurado & Tolchinsky	Szymanska
10:30 – 11:00	Coffee Break			
11:00 – 13:00	<b>Symposium</b> <i>Room 250</i>  <b>Chairs: Chanquoy &amp; Fartoukh</b>	<b>Individual Papers</b> <i>Room 249</i>  <b>Chair: Quinlan</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Álvares Pereira</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Nottbusch</b>
11:00	Olive, Carré-Bellec, & Cournil	Grabowski	Kruse	Van Steendam, Rijlaarsdam, & Van den Bergh
11:30	Reilly & Lai Costa, Alves, Barbosa, Olive, & Piolat	Barnett & Boella	Fürer, Gantenbein, Perrin, Sick, & Wildi	de Gloppe
12:00	Aillaud, Dalet, Knibbe, & Piolat	Weinzierl	Villalón, Rijlaarsdam, Mateos, & van den Bergh	Jacquin
12:30	Fartoukh, Chanquoy, & Piolat	Sausset, Lambert, & Olive		Lindgren & Stevenson
13:00 – 14:00	Lunch			
14:00 – 16:00	<b>Individual Papers</b> <i>Room 250</i>  <b>Chair: Alamargot</b>	<b>Symposium</b> <i>Room 249</i>  <b>Chairs: Barnett</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Rijlaarsdam</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Alves Martins</b>
14:00	Arseneau & Boivin	Williams, Larkin, & Blaggan Sumner, Connelly, & Barnett Rosenblum Prunty, Barnett, Plumb, & Wilmut	Myhill	Tolchinsky & Alonso- Cortés
14:30	Fryer & Foucambert		Cumming	Schneevoigt
15:00	Flouret, Alamargot, Pontart, Paduraru, & Fayol		Wilcox & Yagelksi	Gaitas & Alves Martins
15:30	Paduraru, Alamargot, Pontart, & Fayol		Ouellet, Wagner, Dubé, Boily, Gauvin, Prévost, Turcotte, & Cogis	
16:00 – 16:30	Poster Session I & Coffee Break			
16:30 – 17:30	Keynote Lecture: J. Hayes			
17:30 – 18:30	SIG Writing Business Meeting			
18:45 – 20:00	BUS Tour Sightseeing			
20:00	Conference Dinner			



## **Hypertext writing and observational learning: Effects on process characteristics and quality of writing products**

Martine Braaksma<sup>1</sup>, Gert Rijlaarsdam<sup>1</sup>, & Huub van den Bergh<sup>2</sup>

<sup>1</sup>University of Amsterdam, the Netherlands

<sup>2</sup>Utrecht University, the Netherlands

In our research project we study whether two innovative learning arrangements could improve students' writing skills: learning by writing hypertexts (instead of writing 'linear' texts), and observational learning (instead of performing writing tasks).

We set up an experiment in which 78 students (eleventh grade) followed a lesson series in argumentative writing in three different conditions: two experimental conditions and a control condition. The three versions of the lesson series were similar in many aspects: same text type (argumentative text), theme, documentation materials, instruction time, etc. Only the writing format differed between the conditions. In the experimental condition HYP students (n=26) wrote an essay in hypertext form; in the experimental condition OBS students (n=30) did not write themselves, but instead observed (on video) peer writers writing their essay; in the control group LIN students (n= 22) wrote an essay in linear form. Furthermore, we added an extra control group (CON): students (n=26) followed the regular writing lessons provided by their own teacher. Before and after the lesson series, the text quality of all students was assessed; students wrote argumentative essays in linear form. The text quality of these essays was coded by three independent coders and proved to be reliable. Moreover, the writing of the students' linear texts in pre- and posttest was logged with the key stroke logging program Inputlog, providing indicative data for writing processes.

Results showed differences between conditions for the distribution of pause time during the writing of the (linear) writing task in the posttest. Moreover, aptitude-treatment-interactions for text quality were found: the regression slopes differed significantly between the conditions showing that students with a higher initial writing skill wrote an argumentative text of a higher quality in the posttest when they were in the hypertext-condition or observational learning condition during the intervention than students in both control conditions. It might be that these students could cope with the unusual learning formats of hypertext writing and observational learning and transfer their 'new' writing approach to linear writing.

✉ braaksma@uva.nl



### Game-based practice in writing strategy training

Antje Proske<sup>1</sup>, Rod Roscoe<sup>2</sup>, & Danielle S. McNamara<sup>3</sup>

<sup>1</sup>Psychology of Learning and Instruction, TU Dresden, Germany

<sup>2</sup>Learning Sciences Institute, Arizona State University, US

<sup>3</sup>Department of Psychology & Learning Sciences Institute, Arizona State University, US

Computer-based writing instruction (CBWI) is a promising method to facilitate students' development of writing strategies. Acquiring a writing strategy usually requires a significant commitment to practice (Kellogg & Raulerson, 2007), which is necessary for writers to automatize their newly-acquired procedural knowledge. However, achieving sustained student engagement with practice can be a challenge. One potential solution is to foster engagement by embedding writing practice in educational games, and thus may lead to more productive practice and learning (e.g., Garris, Ahlers, & Driskell, 2002; Gee, 2005). Currently, there is little research comparing the effectiveness of game-based practice to traditional practice in CBWI.

In the present study, 57 college undergraduates were randomly assigned to one of three experimental conditions: game-based practice, traditional practice, and writing-based practice. All students first learned strategies to write an essay introduction. Subsequently, game-based practice consisted of playing Essay Launcher, a game in which students applied the strategies in order to rescue stranded spaceships. The traditional practice task was identical, but all game elements (e.g., the narrative, graphics, and points) were removed. Students in the writing-based practice condition wrote three introduction paragraphs each based on a different prompt. Game-based practice was expected to encourage students to engage in more sustained, strategy-specific practice, which in turn was expected to facilitate learning and application of the strategies.

There were no significant differences among conditions with respect to prior strategy knowledge and conditions did not differ in time spent practicing or perceptions of the practice activities. Conditions significantly differed on posttest measures of declarative and procedural strategy knowledge controlling for prior strategy knowledge (Wilk's  $\Lambda = 0.74$ ,  $F(8, 98) = 2.04$ ,  $p < .05$ ). The results suggested that game-based practice had a specific, beneficial impact on strategy learning. Specifically, the game condition significantly outperformed the other two conditions on tasks that required the application of the practiced strategies. There were no differences between conditions for declarative or procedural knowledge that was not trained or practiced. Implications for designing more effective practice tasks in CBWI will be discussed.

✉ antje.proske@tu-dresden.de

## **Influence of writing instruction and cognitive skills on undergraduate students' academic writing**

Mariet Raedts<sup>1</sup> & Gert Rijlaarsdam<sup>2</sup>

<sup>1</sup>Hogeschool-Universiteit Brussel, Belgium

<sup>2</sup>University of Amsterdam, the Netherlands

We examined the effects of students' cognitive skills and three types of writing instruction on an academic writing task, i.e. writing a section for a literature review. Previous experimental studies compared the effects of two instruction types: observational learning and learning by doing (e.g. Braaksma et al., 2002; Couzijn, 1999; Groenendijk et al., 2011; Raedts et al., 2007; Zimmerman & Kitsantas, 2002). We added a third instruction method to our experimental design: learning from text models written by peers.

One hundred and twenty-seven undergraduate students at a Belgian university participated in a 2-hour writing course in which instruction type was manipulated. Regardless of condition, students received a 10-page course text. Each section dealt with one aspect of the writing task (e.g. choosing a suitable title or writing the conclusion) and ended with an exercise. Control group students ( $N = 48$ ) completed the exercises themselves (learning-by-doing). Students in the learning-from-text-models condition ( $N = 40$ ) evaluated peer answers. Students in the observational condition ( $N = 39$ ) observed and evaluated a video-based peer model performing the exercises under think aloud conditions. One day after the intervention, all students wrote a summary text based on the same research articles.

A two-way ANOVA yielded a significant main effect of instruction type on students' synthesizing skills ( $F(2, 121) = 6,194, p = .003$ ). Post-hoc analyses only showed significant differences between the learning-by-doing condition and observational learning ( $p = .002$ ). Students' cognitive skills (measured by a logical reasoning test at the beginning of the academic year) had no main effect on their writing performances; nor did we find an interaction between condition and cognitive skills. Hence, our findings provide evidence that observational learning facilitates the transfer of complex writing skills to a comparable writing task irrespective of student's thinking capacities.

✉ [mariet.raedts@hubrussel.be](mailto:mariet.raedts@hubrussel.be)

**The impact of an invented spelling programme with pre-school-age children on early reading acquisition**

Margarida Alves Martins, Liliana Salvador, Ana Albuquerque,  
Carla Lourenço, & Ana Cristina Silva

ISPA – Higher Institute of Applied Psychology, Portugal

Various authors have begun to attach value to early spellings. They argue that invented spelling activities with pre-school-age children help to develop phonemic awareness and to grasp the alphabetic principle, as they induce metalinguistic thinking about the written code. These activities have consequences on the ability to analyse the oral segments of words and to discover the relations between those segments and the corresponding letters - children use the repertoire of letter's names and sounds they have acquired very often in formal contexts of learning. In this sense children seem to find it easier to develop alphabetic analytical procedures in writing activities rather than in reading ones. Recent studies with pre-school-age children (Rieben, Ntamakiliro, Gonthier & Fayol, 2005; Ouelette & Sénéchal, 2009) have shown that invented spelling can also play a causal role in learning to read in French and in English. In the line of these studies, our aim is to assess the impact of an invented spelling programme on pre-school-age children's early reading acquisition in Portuguese. We worked with 120 pre-school-age children from 9 kindergartens who were not able to read or write words. Their intelligence, knowledge of letters and phonological abilities were controlled. Children were randomly divided in an experimental and a control group. They were evaluated in a pre- and a post-test where they were asked to write and read a set of words. Between the two tests, experimental group participated in an invented spelling programme designed to induce metalinguistic thinking on written language (10 sessions). Children from the control group were asked to do some drawings. We expected the experimental group to have better post-test scores on invented spelling and reading than the control group. Two ANCOVAs showed statistically significant differences between the 2 groups, the experimental one having better results in spelling (spelling more often the corresponding letter of the phonemes of the different words) and reading (decoding more letters and reading more words) than the control group, as expected. Our results show that invented spelling activities have a positive impact on early reading skills in Portuguese, as it was shown for other languages.

✉ [mmartins@ispa.pt](mailto:mmartins@ispa.pt)

## **Early semiotic literacy: How do preschool children produce and understand pictograms?**

Heike Drexler, Rita Schneevoigt, & Elfriede Billmann-Mahecha

Leibniz University Hanover, Germany

Early semiotic literacy is an important prerequisite of writing development at school. We know that preschool children do have symbolic categories for writing and script, and distinguish them from other concepts like drawing and picture. But regarding symbolic systems like pictographic signs, there is still a lack of developmental research. To explore children's semiotic literacy we conducted a cross-section pilot study with four-to-six-year-old kindergartners (N = 39). In individual sessions we analyzed their abilities to produce and understand pictograms and logos. In a production task we asked the children to draw a prohibition sign, which informs other kindergartners that it is not allowed to eat ice cream there. The results show a) that the majority of the children (64%) are able to produce an understandable sign, and b) that this ability seems to be mainly influenced by gender (boys managed the task better than girls) and by the migration background (children with Turkish migration background had more difficulties than children without a migration background). Next, we presented five pictograms (e.g. the traffic sign for "Road works") and asked the children to describe their meanings. Last, we presented a sorting task with 12 logos from the children's everyday experience and asked which ones they know. For these comprehension tasks, results show the expected effect of age: The older children know more signs and more logos than the younger children, and they are more able to interpret unknown signs in a comprehensible way. Furthermore the parental education background correlates with the performance. Overall, our results reveal some semiotic abilities of preschool children, which are influenced by age, gender, and socio-cultural background. Over and above this, qualitative analysis of the children's comments on the unknown signs help to understand the characteristics which children use to decode the meanings of symbols (such as colour, crossed out items, etc.). In addition to the quantitative results, we will demonstrate this qualitative approach by means of a case study. To sum up, we consider the obtained results a first step towards exploring the role of early semiotic literacy for the acquisition of writing skills during primary education.

✉ [drexler@psychologie.uni-hannover.de](mailto:drexler@psychologie.uni-hannover.de)

## **Invented spelling programmes and letter names: The phonetization process**

Inês de Vasconcelos Horta<sup>1</sup> & Margarida Alves Martins<sup>2</sup>

<sup>1</sup>Instituto Superior de Educação e Ciências, Portugal

<sup>2</sup>ISPA – Higher Institute of Applied Psychology, Portugal

Understanding the alphabetic principle depends on the on the association between phonemic awareness and letter knowledge (Adams, 1990), leading to phonetized spellings. Thus, spelling activities in kindergarten contribute to the understanding of this principle (Martins & Silva, 2009; Treiman, 1998; Vernon & Ferreiro, 1999).

Martins and Silva (2001, 2006) and Silva and Martins (2002, 2003) conducted invented spelling programs that led to a clear progress in children's spellings and to an improvement in children's phonemic awareness.

Despite showing the importance of spelling activities this studies only considerer the final results, with no indication of the processes behind spelling development.

Hence, this study aims to understand the factors that lead to spelling development through the analysis of child/adult interactions during an invented spelling programme.

The participants were 38 pre-syllabic five-year-old children. The invented spelling programme was organised in four individual sessions, in which children were invited to spell twelve words, after what they were shown confrontation spellings. Then they were asked to analyse the word orally, to think about the letters that were used in both spellings and to choose the best, justifying their choice. Children were induced to think about speech, letters and the relations between them. This procedure is based on Martins and Silva and Silva and Martins studies.

The analysis showed that some children were more aware of letter to sound relations during the interaction, which lead to a more explicit feedback from the experimenter. The results indicate that these children presented a higher number of phonetizations in the post-test. The results also indicate that the number of phonetizations in the post-test has a significant correlation with the number of letters known in the pre-test, whereas with phonological awareness does not. Phonological awareness was assessed through the classification of words according to the initial sound – syllable or phoneme. These results highlight that, despite the fact that children may be able to identify the phonemes in a word, letter knowledge leads to more explicit relations between sounds and letters, enhancing spelling development.

✉ vasconcelos.ines@gmail.com

**Structure and content coherence in children's written narratives:  
A neurocognitive approach**

Elise Drijbooms, Ludo Verhoeven, & Margriet Groen

Behavioural Science Institute, Radboud Universiteit Nijmegen, the Netherlands

Within the domain of writing research, the early stages of writing development, starting with the mastery of basic spelling and motor coordination required for handwriting, are extensively documented. However, to acquire adult-level writing skills, children need to move beyond the single word level and learn to approach the text as a whole. Writing a text such as a narrative requires the child to move attention from a mere consideration of transcription-level factors such as spelling and handwriting to an elaboration of composition and text generation skills, referring to the content and organization of a text. A variety of cognitive processes, including executive functions, are hypothesized to be crucial to maintaining the multilevel organization involved in telling a story (e.g. Kellogg, 2008). However, the nature of these cognitive capacities and the degree to which they influence different aspects of the writing process and the writing product remain largely unknown.

In the current study the relationship between executive functioning and two aspects of the macro-organization of written texts, structure coherence and content coherence, was investigated in the narratives of 120 Dutch children in fourth grade. We defined structure coherence as the organization and sequencing of events into meaningful episodes, whereas content coherence refers to the semantic informativeness of a text and the maintenance of topic and content over a number of utterances. A picture-description task - the Expression, Reception and Recall of Narrative Instrument (Bishop, 2004) - was used to elicit the narratives. Different cognitive and linguistic skills were measured according to a multidimensional developmental model of executive functioning (Anderson, 2008), including measures of cognitive flexibility, goal setting, attentional control and information processing. The results of our study do not only specify the role of particular dimensions of executive functioning for the adequate use of coherence in written texts, but also have clear implications for educational settings.

✉ [e.drijbooms@pwo.ru.nl](mailto:e.drijbooms@pwo.ru.nl)

## **Visual and phonological coding strategies and the development of children's writing skills**

Lorna Bourke, Simon Davies, & Alyson Blanchard

Liverpool Hope University, UK

The process of writing for emergent writers is supported both by verbal and visual short-term representations (Bourke & Adams, 2010). In order for writing to be considered meaningful it is essential that the orthographic configuration of the correct grapheme correspondence to represent the speech-based code is identified. This suggests that there will be some reliance on visual memory to support the visual discrimination skills that are required to accurately map sounds onto symbols (Gathercole & Baddeley, 1993). During the early school years there is a shift in the development of spontaneous recoding of visual stimuli into a phonological code in order to aid short-term memory retention. This has also been shown to be associated with progress in learning to read and write (Palmer, 2006; Adams, Simmons, Willis & Porter, 2012). This study examined the strategies children in their Reception Year of school in the UK (aged 4-5 years) employed to write single words in the contexts of a spelling test and an independent writing task. This included an examination of pre-spelling and rudimentary errors, major nonphonetic errors and order errors, which would indicate that the children were applying a visual coding strategy. In addition, further measures were taken to examine the relative use of phonological coding in their writing (basic phonetic, semi phonetic, plausible phonetic errors). A series of hierarchical regression analyses suggest that writing, spelling and alphabetic transcription performance was predicted by error type. There were a number of children employing a spontaneous phonological coding strategy and those children performed better on the writing tasks at sentence, word and letter level. Furthermore, the findings suggest that those children with the better performance are less likely to be making visual errors. Corresponding to this, additional analyses indicate that the identifiable differences between children in their use of coding strategies were associated higher scores in visual working memory and the efficacy with which they could code multiple orthographic representations (letter, letter cluster and word). The theoretical and practical implications for the visual skills that underpin the development of emergent writing will be discussed.

✉ [bourkel@hope.ac.uk](mailto:bourkel@hope.ac.uk)

## **Growth of the text-embedded lexicon in Catalan from childhood to adolescence**

Anna Llaurodo & Liliana Tolchinsky

University of Barcelona, Spain

Lexical development is a key facet of later language development. The lexical domain shows, quite uniquely, the way in which context and cognition interact. Throughout schooling, a literate lexicon is built up through which abstract concepts are accessed and complex, denser nominal syntactic structures are developed favouring a rich adjectival texture. The remarkable changes that occur at the lexical, morphosyntactic and discursive levels could hardly take place without increased experience with the written language. Therefore, performance in the written modality must be considered in order to characterize the linguistic knowledge of school-age children. Lexical forms must not be considered as abstract, isolated elements but rather in relation to how speakers use them in different communicative circumstances, therefore lexical growth should be evaluated in text-embedded contexts.

This study examined the development of the text-embedded written lexicon of 2,161 Catalan children and adolescents from diverse home language background distributed throughout compulsory schooling. Participants were asked to produce 6 different types of text: a film explanation, a film recommendation, a joke telling, a definition of a noun, of a verb and of an adjective in their habitual language class. A corpus was compiled with the 11,332 texts obtained. We aimed at tapping changes in lexical usage across school grade and type of text. Four distributional measures suitable for cross-linguistic lexical assessment were applied: word length, lexical density, presence of adjectives, and nominalizations, and level of text formality.

Results show that word length, use of derived adjectives and nominalizations – three measures of morphological complexity- were better indicators of lexical development, genre differentiation and linguistic background than lexical density. Heylighen's F-measure, discriminated between types of text but not developmentally. The study depicts the extent to which developmental changes in lexical complexity are attuned to the specific communicative purposes of different genres.

✉ [anna\\_llaurado@yahoo.es](mailto:anna_llaurado@yahoo.es)



## **Morphology in French spelling**

Isabelle Negro, Lucile Chanquoy, Bruno De Cara, & Marie-Claire Hazard

Univ. Nice-Sophia Antipolis, France

Written language is particularly difficult in French because of the depth of spelling. French language is characterized by lexical inconsistency and opacity of morphological marks, which must be written without phonological clues. This study is part of a large research designed to better understand how pupils acquire the various skills allowing them to face with lexical and morphological difficulties in French. It also aims at giving more efficient guidelines for remediation. The data presented here are focused on our first results about morphological spelling.

Usually the processing of grammatical spelling is supposed to be managed by rules (e.g., “it is necessary to add –s at the end of plural nouns”; Pinker & Prince, 1988, 1994; Marslen-Wilson & Tyler, 1998; Clahsen, 1999). However, the researches carried out during these last 15 years have shown that children would implicitly acquire some pieces of knowledge about the structure of their language, which would help them to manage grammatical processing, some associations being automatically processed without the systematic use of learned rules (Colombo et al., 2004; Cousin, Largy & Fayol, 2002; Gombert, 2003; Pacton, 2005; Pacton, Fayol & Perruchet, 2005; Rumelhart & McClelland, 1986). Here, the objective is to propose a precise description of the acquisition of morphology, from Grades 1 to 9, in controlling the lexical characteristics of words. Pupils were asked to complete written sentences with orally provided target words. All the target words were morphologically complex: suffixed and inflected words (in number for nouns, adjectives and verbs, in gender for adjectives and in mode for verbs – past-participle vs. infinitive form). Our cross-sectional data claim for a very low mastering of morphology during school years and show considerable differences within lexical units. For instance, the processing of adjectives is slower than those of nouns and verbs. The results also reveal that younger writers tend to store and to retrieve morphological complex words rather as complete units and not really as roots to which affixes have to be added. The data are discussed in the light of theories that consider learning at school as a result of interactions between implicit and explicit learning.

✉ Isabelle.Negro@unice.fr

**Identifying grammatical categories:  
The key to mastering the spelling of homophones**

Marie-Claude Boivin<sup>1</sup> & Reine Pinsonneault<sup>2</sup>

<sup>1</sup>Université de Montréal, Canada

<sup>2</sup>Université du Québec à Montréal, Canada

In secondary schools, students (12 to 16 years old) learning French as L1 show persistent difficulties to spell words such as «mon/m'ont, tes/t'est, la/l'a», etc., known as homophones. The teaching of the spelling of homophones generally relies on «tricks». These tricks use substitution by a word whose grammatical category is known, but this grammatical reasoning is rarely explicitly exposed. As a consequence, the students tend to forget the tricks or to apply them in a wrong way, thus losing their only guideline for the spelling of homophones.

In this paper, we will show how the homophones can be taught and learned within the grammatical framework known as «grammaire nouvelle» («new grammar», cf. among others Genevay, 1994; Boivin and Pinsonneault, 2008), which relies on active learning (Chartrand, 1996; Nadeau and Fisher, 2006). In the context of a research-action we have designed, in collaboration with a 7<sup>th</sup> grade teacher, a series of six lessons implementing our approach. The teaching of the lessons was preceded by a pre-test, and followed by a post-test, both consisting of a dictation, and a written composition of 300 words.

Our approach relies on two principles: the identification of grammatical categories within a grammatical phrase and the use of syntactic paradigms. The identification of the grammatical category of the word leads to its proper spelling.

Let us illustrate with the choice between «mon» and «m'ont». If the homophone is in an NP (grammatical phrase) as in «mon ami», it is a determiner (grammatical category) and it is spelled «mon»; if it is in a VP (grammatical phrase) as in «ils m'ont vu», it is a sequence pronoun+auxiliary (grammatical categories) and it is spelled «m'ont». The students discover two paradigms: determiners in the NP (mon, ton, ma, ta, mes, etc.), and pronouns in the VP, which may form the sequence pronoun+auxiliary (m'ont, t'ont, m'a, t'a, m'est, etc.).

Aside from the approach, we will present the results of our comparative analysis of the spelling of homophones (pre- and post-test). Preliminary results regarding the students' performance in the writing of a short text during the last lessons of the series show that 86% of the homophones taught in the lessons were spelled correctly.

Our approach extends to the spelling homophones in other languages. For instance, in English «its» is a determiner (grammatical category) in an NP (grammatical phrase) and «it's» is a sequence pronoun+verb (grammatical categories).

✉ marie-claude.boivin@umontreal.ca

## **Tense patterns in conclusion sections of English academic text**

Jolanta Alicja Szymanska

English Department, University of Opole, Poland

This paper analyses conclusion sections in linguistic research articles. More specifically, it is an attempt to reconstruct the author's stance encoded in the rhetorical tensed verb choice. The approach assumed in this analysis is the textual approach to written text study. The analysis, both quantitative and qualitative, has illustrated the frequency and distribution of the tensed final verb phrase and an attempt has been made to explain the writer's lexico-grammatical choices in terms of possible intra-textual and inter-textual linguistic behavior. Modal verbs have been discussed from the perspective of their dominant lexical and rhetorical rather than strictly tense potential. Rhetorical communicative strategies encoded in the selection of tensed verbs have been described as purposeful communicative behavior rooted in cognitive processing of time-tense relations, as well as in conventional repertoire of linguistic moves characteristic for particular disciplinary discourse.

The theoretical background refers particularly to the study of transferring meaning in contexts in disciplinary discourses, represented by the works of K. Hyland (2009), J. Swales (1990), Ch. Gledhill (2009), and V. B. Bhatia (2002). Cognitive perspective, on the other hand, follows from the research reported by R. Langacker (2008).

According to the results, present simple tensed verbs predominate in the communication in conclusion sections of linguistic research articles to near 70% of occurrences. Present perfect tensed verbs together with the modal verbs cover nearly 30%. The remaining verbs are past simple tensed. Interestingly, the Present Perfect tense is used in clauses whose subjects are personal pronouns referring to the writer, which significantly outnumber those in which other nouns occupy the subject position. This, among other observations, have led to formulating patterns of the writer's linguistic behavior in terms of intra-textual and inter-textual communicative strategies.

This pilot study proves the need for further analysis of tense use in academic writing focusing on grammatical structure in the processes of negotiating meaning and transferring knowledge. As we have argued elsewhere (Szymanska, 2011, *The Interpersonal Stage in academic Discourse*, [in press]), written texts situated in particular discourses are marked with particular types of interaction. Studying these texts uncovers social conditioning and real life human relationships behind verbal communication and helps setting borders between different genres of texts and levels of discourse realizations. The immediate implications of our analysis are twofold. First, it sheds light on the possibility of treating tensed verb use as more than just conventional. Second, it may facilitate the process of teaching academic writing for specific purposes.

✉ [szymanska.jolanta@interia.pl](mailto:szymanska.jolanta@interia.pl)

**Symposium**  
**Writing & Emotions, part II**

Lucile Chanquoy & Michaël Fartoukh  
Université de Nice – Sophia Antipolis, France

Since Hayes and Flower (1980) models, writing has been widely studied in the field of cognitive psychology. Much research has focused on the different kinds of knowledge involved (i.e., content and language), on writing processes (planning, translating, revising) and on the impact of the cognitive system (working memory, long-term memory) on the quality and quantity of writing (see Alamargot & Chanquoy, 2001). Thus, the different aspects of writing expertise (Kellogg, 2006) and the modalities of writing development have been identified (Berninger & Swanson, 1994). In 1996, Hayes proposed “A new framework for understanding cognition and affect in writing” that had an important impact on the study of cognitive and affective aspects of writing. However, there is still little research on this topic whereas the literature about “emotion and cognition” is very abundant (Sander & Scherer, 2009).

Therefore, the aim of this symposium is to present some studies analyzing the interaction between emotions and writing processes both in expert and novice writers. It seems to us that it is important to investigate the impact that the writer’s “emotional state” has on the written text, and how the affective load of the task impacts on cognitive processes.

**Discussant**

John R. Hayes  
Carnegie Mellon University, US

## **Working memory and inhibition of intrusive thoughts during expressive writing**

Thierry Olive, Christine Carré-Bellec, & Anaïg Cournil  
CNRS & University of Poitiers, France

Expressive writing refers to situations in which individuals are asked to write a text expressing their thoughts and feelings about a stressful personal event (Pennebaker, 2004). Several authors have postulated that after a stressful event intrusive thoughts are automatically activated and that they reduce the capacity of working memory (WM). In that perspective, expressive writing would help individuals suppressing their intrusive thoughts and would therefore increase WM capacity (Klein & Boals, 2001). Although this increase of working memory capacity has been confirmed, the associated reduction of intrusive thoughts has not been systematically observed (Kellogg, Mertz, & Morgan, 2010, Klein & Boals, 2001; Yogo & Fujihara, 2008). In this context, we conducted two experiments that examined the increase in WM capacity and the associated reduction of intrusive thoughts. We also tested the hypothesis that suppression of intrusive thoughts the role is related to participants' inhibition skills.

In the two experiments, participants composed either a neutral text (control group) or a text about a negative personal event (expressive group) during three writing sessions, each separated by a week. Participants' inhibition skills were measured with the Stroop and Hayling tests at the beginning of the experiments. Participants' WM capacity and level of intrusive thoughts were measured at the beginning and at the end of the experiments, with the OSPAN test and Impact of Event Scale-Revised, respectively.

Findings of Experiment 1 confirmed that expressive writing helps individuals suppressing their negative thoughts associated to the negative event. This decrease in intrusive thoughts was shown to correlate with their inhibition skills. Unexpectedly, WM capacity did not increase. This may be due to the low reduction of intrusive thoughts observed in the present experiment by contrast with the higher reduction observed by Klein and Boals (20001). This may result from the fact that post-experimental WM capacity and level of intrusive thoughts were measured just after the final writing session, At that moment, the effects of expressive writing may not be fully achieved and some thoughts related to the negative event may still be activated.

To test first that a high suppression of intrusive thoughts required time and second that WM capacity increases only with high suppression of intrusive thoughts, in Experiment 2, post-experimental WM capacity and intrusive thoughts were measured one week after the final writing session. Data analysis is still in progress.

✉ [thierry.olive@univ-poitiers.fr](mailto:thierry.olive@univ-poitiers.fr)

**Language and emotion in written narratives of children  
with High Functioning Autism**

Judy S. Reilly<sup>1</sup> & Janie Lai<sup>2</sup>

<sup>1</sup>San Diego State University, US & Université de Poitiers, France

<sup>2</sup>San Diego State University, US

Autism as a neurodevelopmental disorder is characterized by linguistic and social-emotional deficits, and while studies have documented the language and social delays in toddlers and preschoolers with High Functioning Autism (HFA), there is limited research investigating the linguistic and social profiles of school-aged children with HFA. Since narratives are structured, organized packages of linguistic content used for social purposes (Ochs & Capps, 1996), they are an ideal context for investigating the intersection of linguistic and social-emotional abilities in children with HFA. Studies of their spoken narratives has shown that children with HFA produce narratives that are inferior to those of their typically developing (TD) peers (Goldman, 2008; Losh & Capps, 2006, Lai, 2011). However, little is known regarding their written discourse. Thus, the present study examines written narratives by children with HFA (ages 8;0-12;0 years of age), and their age-matched TD peers. The children were asked to write a story about ‘a time when someone had made them sad or angry’. Narratives were transcribed and coded for linguistic measures (e.g., morphological errors, complex syntax), social-emotional measures (e.g., evaluative devices), and discourse measures (e.g., narrative content and structure). Results showed that school-aged children with HFA produce shorter, and less complex stories compared than their typically developing peers. The HFA group made more errors and used less complex syntax than the TD group. With respect to social-emotional qualities, the HFA group used fewer evaluative devices overall than the TD group, but the vast majority of children with HFA were able to use some evaluative terms, e.g., emotional words. With respect to discourse measures, narratives from the HFA group were less coherent than those of the typically developing children, however, all but one child with HFA was able to identify an emotional situation or problem and relate a pertinent, but relatively impoverished, personal emotional narrative. These findings suggest that children with HFA can identify and share personal narratives with others, but the effort to do so is evident in the poverty of their written discourse.

✉ reilly1@mail.sdsu.edu

**EMOTAIX.PT, an emotional word database in European Portuguese**

Sara Costa<sup>1</sup>, Rui A. Alves<sup>1</sup>, Fernando Barbosa<sup>1</sup>, Thierry Olive<sup>2</sup>, & Annie Piolat<sup>3</sup>

<sup>1</sup>University of Porto, Portugal

<sup>2</sup>CNRS & University of Poitiers, France

<sup>3</sup>Aix-Marseille Université, France

Language is the most common way for people to translate their internal thoughts and emotions into a form that others can understand (Tausczik & Pennebaker, 2010). Previous studies report that words, which people use, are diagnostic of mental and physical health (Pennebaker & Graybeal, 2001). In this way, the development of modern text analysis software is useful for research because it allows the identification of the words referring to emotions, moods and feelings in written production. Piolat & Bannour (2009) developed a tool, which allows to detect, classify, and quantify the French emotional and affective lexicon. The EMOTAIX word database contains 2,014 references grouping together 4,921 words. In this database, lexical items are classified according to the valence (positive/negative), use (literal/figurative meaning) and nature (semantic category). Due to the inexistence of an emotional word database for the European Portuguese Language, we decided to adapt the French database. For that, the first step was to select the literal use entries and translate them to Portuguese. The second step was the selection of emotional words contained in the Porlex, a lexical database (Gomes & Castro, 2003). From these two sources we collected 4,775 words, which were organized taking account the positive or negative valence and the semantic category. In the original database, Piolat and Bannour arrived at 28 basic categories. In the Portuguese database, we preserved most of the categories but due to the specificities of the Portuguese language, some categories were joined. With this process of reorganization and also the help of a Portuguese dictionary we arrived at a total of 25 basic categories on each side of the hedonic axis. The content of this database can be analyzed at three hierarchical levels of organization. This Portuguese database was tested in an experimental study in which were created three writing conditions. Graduate students were asked to write about their most traumatic experience, most wonderful experience and its daily routine. While writing, physiological measurements of the skin conductance and heart rate were collected. This experimental study confirms the validity and usefulness of the EMOTAIX.PT.

✉ mipsi07136@fpce.up.pt

## **Effect of a musical induction on the emotional content of a car accident's story**

Marlène Aillaud, Magali Dalet, Cédric Knibbe, & Annie Piolat  
Department of Psychology, Aix-Marseille University, France

The content of written productions as a function of the emotional state of individuals has generally been studied in the case of the writing cure (Frattaroli, 2006; Piolat & Bannour, 2011). We also know that an individual reactivates intensely an emotional state in which he/she was at when recollecting a pleasant or painful event (Rimé, 2009). However, we lack research on the impact of an emotional induction on what the writer can describe concerning a very disturbing situation in which he/she attended. The question is whether individual's attentional resources, cognitive skills and written editorial products are impacted when producing a text in a dramatic context (Corson, 2002; Kellogg Mertz, & Morgan, 2010; Klein & Boals, 2010).

Operationally, 51 participants viewed an individual spot of road safety in one of two conditions: with or without music (music which function is to dramatize the context of the accident: Baumgartner, Esslen, & Jancke, 2006) (Phase of emotional induction). Then the participants wrote in a dual task situation (Piolat et al., 1999) in order to measure the attentional resources still available in their essay (test phase). Finally, they watched the film again. The emotional impact was measured using the BMIS (Mayer & Gaschke, 1988) (Phase measurement of the impact of induction).

The results are analyzed and will test three main hypotheses: (1) The addition of a disturbing music to viewing the film of an accident should increase the feeling, (2) In the most moving situation, participants should have fewer attentional resources (i.e., longer mean reaction times), (3) They should express more feeling in their text (content analysis of emotions via EMOTAIX and French LIWC; Piolat & Bannour, 2009; Piolat, Booth, Chung, Davids, & Pennebaker, 2011).

✉ marlene.aillaud@univ-provence.fr



## The effect of an emotional content on text spelling in 4<sup>th</sup> and 5<sup>th</sup> graders

Michaël Fartoukh<sup>1</sup>, Lucile Chanquoy<sup>1</sup>, & Annie Piolat<sup>2</sup>

<sup>1</sup>Université de Nice – Sophia Antipolis, France

<sup>2</sup>Aix-Marseille University, France

The aim of this study was to analyze the consequence of an emotional content during text writing, in accordance with Hayes' (1996) model, which suggested that affects have an important role during the writing process. Emotions are expected to cause interferences in working memory by creating an extra cognitive load. In reference to the "Resource allocation model" (Ellis & Ashbrook, 1988; Ellis & Moore, 1999), the assumption that the emotional content (positive or negative) has the same effect in working memory than a secondary task, competing for the same pool of resources, was tested. In order to observe if an emotional content should cause a cognitive overload in WM during writing, three conditions have been tested with fourth and fifth graders. These children had to write a text with (1) a positive emotional content, (2) a negative emotional content, or (3) a neutral emotional content. Two main text variables were assessed: the length (measured by the number of words) and the spelling accuracy (measured by the proportion of lexical and grammatical errors compared to the number of words) according to the 3 writing conditions and the 2 grade levels. In addition, each written texts was analyzed using the Emtaix-Tropes software, a tool for analyzing the French emotional and affective lexicon, built by Piolat and Bannour (2009). It provides a possibility to qualitatively analyze children's written productions.

The obtained results did not show any effect of the emotional instructions on the proportion of spelling errors, but only an effect on the text length. Indeed, texts were shorter in the negative condition than in the two other conditions (positive and neutral). However, the simple regressions analyses showed a correlation between working memory capacities, measured with the working memory index (WMI), a test specifically standardized for children (Wechsler, 2005, French version), and the number of spelling errors but only in the neutral emotional condition. At last, lexicon analyses (concerning verbs, adjective, pronouns...) showed that emotional instructions have engaged children to be more expressive about themselves and their feelings. These results were discussed in comparison with already obtained results in the literature, particularly by Cuisinier et al. (2010).

✉ michael.fartoukh@unice.fr

## The image of handwriting: Legibility, gender, and text quality

Joachim Grabowski

Leibniz University Hanover, Germany

There is much dispute about the role of handwriting (as opposed to typing or printing block letters) in school education. While handwriting exhausts, unless sufficiently automated, attentional resources from working memory that would be needed for planning and other higher-order processes of writing (Graham et al., 1997), it is also considered an important expression of the developing identity of a literate person. On the basis of a corpus of each 277 reporting, instructional, and argumentative texts, elicited from 5th and 9th grade students under highly controlled (laboratory-like) conditions, we pursued the following issues: (a) Does the legibility of handwriting relate to text quality? (b) Do boys and girls differ with respect to the legibility of their handwriting? (c) Is it possible to predict the writer's gender from his or her handwritten text product? To that end, we developed a multi-variable coding scheme of the text and letter images.

(a) There are no significant correlations between handwriting legibility and text quality, neither for 5th nor for 9th grades, and this holds for all three text types, and for boys and girls as well. Text quality has been assessed from transcribed and orthographically adjusted texts, i. e. independent from handwriting appearance. This result means that handwriting legibility may not directly reflect the varying practice and automaticity of the writers.

(b) Expectedly, handwriting legibility is significantly higher in girls than in boys. However, while girls' handwriting becomes better legible from 5th to 9 grade, boys' legibility decreases over that period.

(c) For 5th and 9th graders, respectively, 72 four-line handwriting samples were systematically compiled and presented to n=111 (for the 5th graders' sample) and n=160 (for the 9th graders' sample) university students who were to determine the gender of the writer and rate the security of their judgements. Results show that from handwriting, the writers' sex can be identified above chance and for girls and boys to similar degrees. Identification rate significantly increases from 5th graders' samples (about 60%) to 9th graders' samples (about 75%).

We will discuss the role of the handwriting image from process-related, gender-related, and identity-related perspectives.

✉ grabowski@psychologie.uni-hannover.de

## **A comparison of the handwriting abilities of French and British children**

Anna L. Barnett & Lucinda Boella

Oxford Brookes University, UK

**Background.** The development of good handwriting is an essential skill that children in the UK must master before moving to secondary education, yet nearly a third of primary leavers fall below required handwriting standards (BBC, 2010). Slow handwriting in particular can lead to academic underachievement, since handwriting speed is linked to both the quantity and quality of compositions (Connelly, Campbell, MacLean & Barnes, 2006). In comparison to England, methods of teaching handwriting in France have been reported as more progressive and more consistent across schools (Thomas, 1996). The aim of this study was to examine the difference in handwriting skills of English and French children and the methods teachers used to teach them.

**Method.** 28 French and 34 English eleven year olds from two primary schools in each country matched on size and socioeconomics of the catchment area participated in the study. Handwriting speed was assessed using the alphabet, graphic speed and free writing tasks from the Detailed Assessment of the Speed of Handwriting (DASH; Barnett, Henderson, Scheib & Schulz, 2007). Scripts from the 10-minute free writing task were assessed for the degree of letter-joining (or cursive handwriting) and were scored for compositional quality using aspects of the Wechsler Objective Language Dimensions (WOLD). Children's handwriting enjoyment and habits were assessed using a questionnaire and teachers completed a questionnaire to assess teaching methods.

**Results.** The French students enjoyed handwriting more and more of their writing was in cursive than the English students. The French students also wrote significantly more slowly and scored lower on quality than the English students. Results of teacher questionnaires were inconclusive due to small samples but indicated that French teachers may spend more time teaching handwriting skills than English teachers.

**Conclusions.** It seems that the French national elaborate and cursive handwriting style contributed to slower handwriting performance. Educational implications of the findings are that primary schools should teach a simple handwriting style that allows students to mix cursive and manuscript letters, in order that speed of writing is not compromised.

✉ [abarnett@brookes.ac.uk](mailto:abarnett@brookes.ac.uk)

**Copying strategies of 4th- and 2nd graders: Evidence from pause data analysis**

Christian Weinzierl

Leibniz University Hannover, Germany

The ability to copy text efficiently is an important basis for many learning processes in school, such as writing down homework, working on math assignments or generally for all kinds of tasks that include given texts. Although there is evidence that working memory resources may play an important role for copy task performance (Grabowski, Weinzierl & Schmitt, 2010), the question of how school children develop good strategies for copying is still largely unanswered. Two experiments are presented in which writing process data of fourth (N=65) and second graders (N=79) were analyzed in order to find out if linguistic processing leads to a more efficient usage of working memory resources during text copying. A two-way 2 x 4 mixed model design was applied, in which (1) two groups of slow and fast copy writers were compared while they (2) copied four different sorts of linguistic and non-linguistic materials (text, numbers, meaningless consonant strings and geometric symbols). Writing pauses served as indicators for chunking strategies, and separate ANOVAs were performed for percentages of pause frequencies at three different linguistic boundaries (between words, within word, within character). For both grade levels, results show that copying meaningful text leads to more pauses between larger linguistic units than copying materials which allow for less linguistic processing ( $p < .001$ ) and that faster writers pause more frequently on boundaries between larger linguistic units than slower writers ( $p$  between .05 and .001). A significant interaction effect did only emerge for second graders ( $p$  between .05 and .01). The reported effect patterns indicate that skilled writers use linguistic information to build larger chunks in working memory when copying whole texts. While fourth graders already have a certain degree of expertise in the domain of copying, second graders still seem to be amidst an ongoing process of strategy development for efficient copying. The reported empirical results can be viewed as meaningful evidence for modeling the cognitive processes underpinning efficient copying as well as for the creation of strategic interventions when devising a curriculum to foster copying skills in school.

✉ [weinzierl@psychologie.uni-hannover.de](mailto:weinzierl@psychologie.uni-hannover.de)

## Effect of graphomotor constraints on the processing of syllables during handwriting

Solen Sausset, Eric Lambert, & Thierry Olive

Université de Poitiers & CNRS, France

Handwriting requires a series of hierarchical processing stages involving different units, ranging from ideas to words and letters. Some recent studies have suggested that the syllable may be one such processing unit. The time course of the processing of syllables, i.e., when syllables are processed, is however still in debate. Such processing has indeed been found to occur either before (Lambert et al., 2008) or during the writing of each word (Kandel et al., 2006).

In that context, this study investigated the influence of graphomotor demands on the processing of syllables. We hypothesized that when the graphomotor demands are low, the processing of all the syllables of a word occurs before the writing. When the graphomotor demands are high, each syllable is processed during the execution, just before being written. Manipulation of graphomotor demands involved four conditions with increased demands: lowercase script, uppercase script, uppercase script with large letters, and uppercase script with large letters without visual feedback. Participants were required to copy three times successively 2- and 3-syllable words. We measured the latencies between two copies of a word, and the interletter intervals at the first syllable boundary, as well as the two interletter intervals immediately preceding and following the syllable boundary.

The results showed that when graphomotor demands were low, the latencies were longer than when the demands were higher. The effect of the number of syllables was significant only for the lower demanding condition. The duration of the interletter interval at the syllable boundary was longer than the within-syllable intervals. This difference grew with the increase of graphomotor demands.

All together, the findings indicate that when the graphomotor demands are low, processing of the syllable occurs during the latency before graphomotor execution of the word. When the graphomotor demands increase, processing of the syllables occurs simultaneously to graphomotor execution, each syllable being processed just before being written. These findings are interpreted in a cascading model.

✉ solen.sausset@univ-poitiers.fr

## **Student beliefs on “good writing”: An intercultural study across three languages**

Otto Kruse & Madalina Chitez

Zurich University of Applied Sciences, Switzerland

In this presentation, we report on a contrastive study of writing cultures at three universities from the French, German and Italian speaking parts of Switzerland. The data we analyzed concern students' opinions on “good writing”. Their views on writing are seen to be part of institutional and disciplinary writing cultures and reflect basic assumptions on literacy. In their academic socialization, students are confronted with new directions in writing which they have to adapt to the literacy aptitudes acquired during primary and secondary education.

In order to assess students' beliefs we used a set of twelve items from a literacy skill questionnaire and compared them with other questionnaire data like self-perceived writing and study skills. A faculty questionnaire administered at the same universities allows us to contrast student data with faculty expectations. Differences between language groups indicate that students' perceptions of “good writing” are closer related to general expectations on language-related cultures than to faculty expectations on academic writing. Finally, by contrasting the student with the faculty data, we observed considerable differences between the two groups in their conception of good writing.

✉ [kreo@zhaw.ch](mailto:kreo@zhaw.ch)

## Modeling writing phases

Mathias Fürer, Thomas Gantenbein, Daniel Perrin, Beate Sick, & Marc Wildi

Zurich University of Applied Sciences, Switzerland

Thus far, writing has been described in the research literature as an interplay of situations, strategies, and phases – with phases being identifiable temporal procedural units with typical dominant writing actions such as “formulating” or “source reading”. Phases are recognized as essential for the success of writing processes. At the same time, most scientific approaches to writing base their phase concepts and phase descriptions on introspection or single case studies.

The methodology for a rigorous, objectively verifiable analysis of the structure of writing processes and therefore for an empirically testable explanation of the nature and interplay of phases in writing processes has not yet been developed. This is exactly what the Modeling Writing Phases (Swiss National Science Foundation, 2010–2013) research project aims to do: to explore and to model writing phases based on statistical methodology and thus to provide a solid foundation for good practice models of writing processes – a condition sine qua no for systematic education in writing.

The research project is based on one of the most extensive data collections of writing processes in natural settings. The data are available in time series format that allows the use of particular statistical techniques beyond those normally associated with corpus linguistics. The dynamics of writing activities such as insertions or deletions can be analyzed and related to background conditions such as the writing task and the experience of the writers. The development of unprecedented methodical approaches for investigating writing processes is situated in the theoretical framework of the Dynamic System Theory. DST enables researchers to track the dynamics of complex systems such as newswriting and to explain the often non-linear change in dynamic contexts. As social structures permanently interact with people’s situated activity, contexts always change.

Results allow us a) to deduce empirically- and theoretically-based models of good practice in writing processes in specific settings and therefore b) to systematically evaluate competence and progress in (professional) writing. Both a) and b) are the conditions sine qua non for the design of systematic writing courses, training and coaching. Practical deliverables of the project include task- and domain-specific good practice models of writing processes. As a first result of the ongoing project, five types of writing phases were identified. For these five phase types we developed algorithms that allow automatic detection by statistical means.

In the presentation, we first outline the project architecture and explain how we identified writing phases in a large corpus of news writing processes from three different TV newsrooms. Then we discuss the results in the light of training materials, which are the practical deliverables from the Modeling Writing Phases project.

✉ mathias.fuerer@zhaw.ch

## **Testing a model of learning through writing: The relationship between students' conceptions, written products and learning outcomes**

Ruth Villalón<sup>1</sup>, Gert Rijlaarsdam<sup>2</sup>, Mar Mateos<sup>3</sup>, & Huub van den Bergh<sup>4</sup>

<sup>1</sup>Open University of Madrid, Spain

<sup>2</sup>University of Amsterdam, the Netherlands

<sup>3</sup>Autonomous University of Madrid, Spain

<sup>4</sup>University of Utrecht, the Netherlands

The value of writing in academic learning has been claimed in several theoretical models (Newell, 2006). However, writing does not necessarily produce changes in either the style or outcome of learning; it depends on how it is used (Tynjälä, Mason & Lonka, 2001; Bangert-Drowns, Hurley & Wilkinson, 2004). The results of writing depend on the way students represent the writing task. They can perceive writing as a reproductive task or as a task, which demands to transform their knowledge (Flower et al., 1990). One of the variables, which can influence students' representations of writing-to-learn tasks, is their conception of writing itself. Several studies have shown that students' beliefs have a bearing on the quality of written composition (Campbell, Smith & Broker, 1998; White & Bruning, 2005). However, most studies have focused on students' written compositions and not on their learning outcomes and, furthermore, they have been carried out mostly with English-speaking undergraduates. On the contrary, in this study we focus on the relationship between secondary school students' conceptions about writing and their written products and learning outcomes. Writing conceptions were examined through a questionnaire designed for a wider research project (Villalón & Mateos, 2009), which contains two scales for identifying two writing conceptions (Reproductive and Epistemic). A synthesis task proposed in a students lecture was taken as a written outcome and the results of a learning test on the synthesis topic was used as a learning measure. Two independent raters scored the students' syntheses according to four dimensions (information included, information organisation, text structure and formal aspects) and the students' answers to the learning questions. In order to test the relations among these variables we compared various competing models using Confirmatory Factor Analysis. Results show that the model that proposes that writing conceptions influence synthesis quality obtains good fit indexes. However, the model which postulates an impact of writing conceptions on written quality and on learning outcomes fits the data best. These results suggest that writing conceptions do play an important role in writing to learn and they should be taken into account in educational contexts.

✉ ruth.villalon@udima.es



## **Collaborative revision of other students' writing in a foreign language**

Elke van Steendam<sup>1</sup>, Gert Rijlaarsdam<sup>2</sup>, Huub van den Bergh<sup>3</sup>

<sup>1</sup>University College Brussels (HUB), Belgium

<sup>2</sup>University of Amsterdam, the Netherlands

<sup>3</sup>University of Utrecht, the Netherlands

Especially in the field of second-language writing quite a number of studies investigate the collaborative revision process of students commenting on each other's work. Some of these studies look at how the feedback is acted upon by the writer (Min, 2005, 2006), others explore the effect of giving feedback (Cho & MacArthur, 2011; Lundstrom & Baker, 2009; Van Steendam, 2008). Still others study the interaction and regulation processes in the feedback groups (De Guerrero & Villamil, 1994). Few studies on foreign language revision, however, investigate how two students collaboratively revise texts not written by any of them (Van Steendam, Rijlaarsdam, Sercu, & Van den Bergh, 2010).

In the present study we closely scrutinize the collaborative revision and interaction processes and resulting revision products of 90 EFL university freshmen revising in pairs (data triangulation). The texts that students are revising are argumentative essays containing both global and local problems typical of the target group. To enable us to study both authentic collaborative revision processes and instructed collaborative revision processes, we assigned the dyads randomly to two conditions: a control group in which pairs did not receive any instruction prior to collaborative revision and an experimental condition inspired by both Wallace and Hayes (1996) and Rijlaarsdam et al. (2008). In the latter condition students were shown two peer models each illustrating a different revision strategy: a global revision strategy followed by a local revision approach.

Multilevel analyses of the product data confirm findings of previous studies on strategy instruction and observational learning (Rijlaarsdam et al., 2008; Van Steendam et al., 2010; Wallace & Hayes, 1996). Pairs in the modelling condition outperformed pairs in the control group for quality of revision of global textual problems, whereas dyads in the control group focused significantly more on editing. Analyses of the interaction in the pairs confirm that the pairs in the modelling condition spent significantly more time on global issues. Additionally, the dyads in the control group displayed a linear revision process, whereas the modelling dyads revised in a more recursive way and engaged in more metacognitive and meta-analytic activities (Braaksma, Rijlaarsdam, Van den Bergh, & Hout-Wolters, 2004).

✉ elke.vansteendam@telenet.be

**Development in argumentative writing in L1 and EFL of Dutch  
secondary school students**

Kees de Glopper

University of Groningen, the Netherlands

Writing research has compared writing processes and performance in a first and a second or foreign language. Schoonen et al. (2003, 2011) found very strong correlations between the writing skills in Dutch and English of secondary school students in the Netherlands. However, the development of writing proficiency between grade 8 and grade 10 seems to be larger in English than in Dutch and writing proficiency in English seems to be better predictable with (psycho)linguistic measures than in Dutch. Stevenson (2005) studied planning, translation, and revision processes in Dutch as L1 and EFL. Analysis of students' EFL-revisions did not demonstrate inhibition of higher order revision processes, but writing fluency was reduced and inhibition was found for generating ideas and setting goals. The aforementioned studies do not delve into text characteristics that are genre specific. This study does so by providing a detailed analysis of the development of argumentative writing in L1 and EFL by Dutch students.

Argumentative letters of 40 secondary school students (a systematic sample from the larger data set of Schoonen et al. (2003, 2011) were analysed. Four letters per student (two from grade 9 and 10 each, two in Dutch and English each) were subjected to analyses of the argumentative structure and the use of indicators for claims and arguments. Comparisons are made (i) between grades and within languages and (ii) between languages within grades. Further, the correlation was determined between aspects of argument structure and use of indicators and the primary trait scores for writing quality.

The analyses of the argumentative features of the letters written in Dutch and English shed more light on parallels and contrasts in L1 and EFL text production and allow for a more specific answer to the question to what extent written argumentation in a foreign language is inhibited. Argumentative structures in Dutch as L1 are more complex than in EFL. In L1 the use of indicators for claims and arguments is more frequent and more diverse. In both Dutch as L1 and in EFL primary trait scores for text quality are strongly correlated with generic features of the argumentative texts.

✉ c.m.de.glopper@rug.nl

## **Task-based, integrated reading and writing of literary genres in a foreign language classroom: Does a writing task enhance text comprehension?**

Marianne Jacquin

University of Geneva, Switzerland

The aim of our empirical research on reading and writing of literary genres in a German as foreign language classroom was to study how students deal with literary short-stories in a task-based design (Müller-Hartmann & Schocker v. Ditfurth, 2005, Rod, 2003), i.e. when text is considered as a starting point for writing. Research in teaching literature in a foreign language (FL) (Bredella, 2004; Maillat-Raymond, 2007; Wicke, 2009) underlines the positive effects of writing activities on text comprehension. In our context we wanted to explore if a writing task drives the reading task in such a way that students deepen their comprehension of a literary short-story. More precisely:

- How do students deal with the read-to-write task?
- Which features of the source text do they integrate in their written productions?
- What is the nature of the link between the final written products and the source text?

The research was carried out with 2 classes of 17-year-old students. We designed an instructional sequence with two teachers that included a task involving the independent reading of a short-story of Bichsel (*Die Tochter*) in order to write a follow-up text in the form of a theatre dialogue. Group work was video-recorded, transcribed, and s-s interactions analysed.

Results show that (1) students generally spend two-thirds of the time writing. They begin with reading and decide to write when they have found a starting idea in the source text. (2) This leads to the invention of a story much or less linked to the sense of the literary text. While writing, students rarely return to the source text. The writing process is guided more by task instructions than by understood text passages. Attention is focused on generating ideas, on vocabulary, grammar and spelling problems. (3) Written products show a distant link to the first level understanding of the read text.

While the task aims at integrating reading and writing activities, the study shows that students tend to separate both. This main result can be explained first by the complexity of writing in a FL context and second by the way students conceive the task itself.

✉ marianne.jacquin@unige.ch

## Interpersonal meaning-making: Letters of young writers in Swedish and English

Eva Lindgren<sup>1</sup> & Marie Stevenson<sup>2</sup>

<sup>1</sup>Department of Language Studies, Umeå University, Sweden

<sup>2</sup>Faculty of Education and Social Work, The University of Sydney, Australia

There is a surprising lack of research on the linguistic and rhetorical characteristics of children's writing (Christie & Derewianka, 2008), and even less research on the characteristics of children's writing in a foreign language (Leki, Cumming & Silva, 2008). In their fifth year of learning English as foreign language, Swedish 11-year olds have just begun to compose simple written texts in English. In our study, we examine the textual and rhetorical features of the texts of 73 Swedish 11-year olds, who wrote one letter to a penfriend in Swedish and one in English. Our first objective is to ascertain whether young writers express interpersonal meanings to the same extent in L1 (Swedish) and FL (English) and whether there are any gender-related differences in the extent to which interpersonal meaning is expressed in L1 and FL. Our second objective is to ascertain how, despite having only limited English writing proficiency, these young writers are able to convey meaning to their readers. Our analysis of the texts draws on work by Christie and Derewianka (2008) and Mortensen (2005), both of whom use a systemic functional linguistic framework. Two analyses were performed on the data. First a macro analysis of the rhetorical structure was performed, in which C-units were defined as either conveying informative or interactive meaning. Second, we analysed semantic expressions expressing interpersonal meaning through a microanalysis that included the categories mood, emphatics, attitude, graduation and modality. Finally a qualitative analysis was performed with a focus on how students expressed meaning in the foreign language. Results (of statistical analyses) showed that the L1 texts were significantly longer and included more ideas, statements and direct questions, and that girls wrote more than boys. However, when text length was controlled for differences in interpersonal meaning between languages largely disappeared, but gender differences remained. Furthermore, a number of means were used by the writers to convey meaning in the foreign language, including invented spelling, non-linguistic resources, and simplifications. Finally we will discuss pedagogical implications of the results.

✉ [eva.lindgren@sprak.umu.se](mailto:eva.lindgren@sprak.umu.se)

**Transferring grammatical knowledge in writing contexts:  
The case of past participle agreement for French L1 students**

Rosianne Arseneau & Marie-Claude Boivin

Université de Montréal, Canada

This action research aims at determining by which means French L1 teachers can help their students transfer grammatical knowledge into their writing. We will present a series of courses on past participle agreement, focusing its most innovative learning activities, and the results of its trial in a class of 9th graders.

For secondary school students, agreement marking is more likely to be successful in the context of grammatical exercises than in authentic writing contexts (Nadeau and Fisher, 2009). Researchers in French grammar and writing instruction believe that this state of affairs is related to a problem of transfer of training, the writing task being particularly demanding on the cognitive system and often causing a cognitive overload. Building on propositions made by researchers working on grammatical spelling, the revision process and/or transfer of training (and notably those adopting an inductive approach, centered on student questioning, and on sentence analysis), we conceived and developed a series of courses on the agreement of past participles used with the auxiliary "être" (to be) or with an attributive verb. We then implemented it in a 9th grade class, and we documented its effects through questionnaires, exercises and texts written by the students in pretest and posttest settings.

Our results tend to indicate the efficiency of the series of lessons. Agreement marking on the past participle used with "être" or with an attributive verb was much better in the posttest than in the pretest. The mean rate of successful agreement marking in exercises went from 53% to 75%, while agreement in the texts is 48% in the pretest, against 82% in the posttest. The questionnaires lead us to believe that this augmentation of successful agreement rate in the texts is related to the progress of the transfer process, probably due in part to work done during lessons on conditional knowledge.

✉ [rosianne.arseneau@umontreal.ca](mailto:rosianne.arseneau@umontreal.ca)

## **Subject-verb agreement in writing production: An online observation of the role of semantic and syntactic attractors**

Maude Fryer & Denis Foucambert

Department of Linguistics, Université du Québec à Montréal, Canada

**Introduction:** In the last decade, a number of studies have highlighted the role of attractors in subject-verb agreement errors. In French, these errors occur when a noun (local noun) agrees with the verb, instead of the subject head noun: The father of the children arrived (In French: Le père des enfants arrivent (Fayol & Got, 1991)). Our research examines the role of syntactic factors (Franck et al., 2002) and semantic integration (Gillespie & Pearlmutter, 2011) and their interaction in subject-verb agreement. Based on a linguistic description, we observe the online production of writers to describe cognitive processes that take place in writing production. Most studies agree that grammatical encoding is hierarchical rather than linear (Franck et al., 2006; Negro et al., 2005). In order to see if syntactic encoding is hierarchical or linear, different syntactic structures were created, with attractors placed in prepositional phrases and in relative clauses. More interference is observed in the prepositional phrases than in relative clauses (Franck et al., 2006). Furthermore, semantic integration between the subject-head noun, the attractors and the verb was controlled (Gillespie & Pearlmutter, 2011).

**Methodology:** Thirty-one students from the University of Quebec in Montreal took part in the experiment. All were native speakers of French. Online writing production is observed with computer software (Inputlog, Leijten, & Van Waes, 2011) that records every action and pause made by the writer. Taking into account that expert writers do not make a lot of agreement errors, this experimental procedure allows a classical observation of errors and particularly of correct subject-verb agreement. Participants were asked to transcribe and revise 42 sentences (16 relative clauses, 16 prepositional phrases, 10 filler items) that were dictated in French.

**Results:** Multilevel analyses were conducted on writing times and pauses with regards to syntactic structure, semantic integration and the subjects' language skills. Shorter writing times are observed when attractors are placed in relative clauses. Pauses before agreement marking and after the verb are longer in PP than in relative clauses, which is coherent with a hierarchical view of language production. Results will be discussed in light of the psycholinguistic and the linguistic models of text production and revision.

✉ maude29@hotmail.com

## **Development of subject-verb agreement in French: Nature and temporal of processes from grade 3 to grade 12**

Lisa Flouret<sup>1</sup>, Denis Alamargot<sup>1</sup>, Virginie Pontart<sup>1</sup>, Carmen Paduraru<sup>1</sup>

<sup>1</sup>University of Poitiers & CNRS, France

<sup>2</sup>University Blaise Pascal, Clermont-Ferrand & CNRS, France

The aim of this study is to understand the development of the processes allowing the success of the subject-verb agreement during the written completion of sentences. Using the “attraction error” paradigm (Bock & Miller, 1991), Fayol and Got (1991), and Hupet, Schelstraete, Damaeght and Fayol (1996) have compared the agreement errors made by children (grade 2 and 5) and adults, with or without a secondary task. They show that the plural agreement remains controlled and costly in children while it is proceduralized and completed with a pregraphic control avoiding errors, in adults (see also Chanquoy & Négro, 2005). In order to deeper understanding the evolution of this processing, we propose (i) to extend the range of comparisons by considering grades 3, 5, 8 and 12, and (ii) to assess the time course of processes in order to evaluate the automatisisation of the agreement procedure and the installation of the pregraphic control.

Four groups of 20 students (grade 3, 5, 8, 12) completed the inflection (“e” or “ent”) of a series of sentences conceived to induce attraction errors (N1 of N2 V: The dog of the neighbours eats) or, on the contrary, to promote a non ambiguous agreement (C N1 V: Every night the dog eats; N1 C V: The dog every night eats). The frequency of the words and semantic plausibility between N1 V and N2 V were controlled.

The reading of the sentences and the completion of the verb inflection were recorded using “Eye and Pen” (Alamargot, Chesnet, Dansac, & Chesnet, 2006). The pauses and rates associated to inflection completion were computed. The information gazed on the sentence and during the completion was assessed analyzing fixations and regressive saccades.

Data analysis is still in progress. The first temporal analyses show a progressive increase in the agreement procedure speed (from grades 8 to 12), associated with the emergence of a strategic control, consisting in gazing on N1 in order to avoid an agreement error, when the sentence is ambiguous (N1 of N2 V). Implications for education and training are discussed in conclusion.

✉ [lisa.flouret@etu.univ-poitiers.fr](mailto:lisa.flouret@etu.univ-poitiers.fr)

## **Avoiding attraction errors during the written production of the subject-verb agreement in French: Functioning of the pregraphic control in adults**

Carmen Paduraru, Denis Alamargot, Virginie Pontart, & Michel Fayol

<sup>1</sup>University of Poitiers & CNRS, France

<sup>2</sup>University Blaise Pascal, Clermont-Ferrand & CNRS, France

The aim of this study is to understand the nature and the dynamics of the processes allowing the success of the subject-verb agreement during the written production of sentences. Using the “attraction error” paradigm (Bock & Miller, 1991), previous studies in written production (Fayol, Largy & Lemaire, 1994; Largy & Fayol, 2001) indicated the existence of a pregraphic control. This control is sensible to cognitive resources and seems to be engaged differently depending on the distribution of plural markers in N1 of N2 V sentences. The objective is to identify the processes composing this control and to describe their time course. When the agreement is problematic, we hypothesize that the control could use the written trace as an external memory for solving the agreement and avoiding errors. We believe that eye-tracking the written production of sentences can shed light on such a functioning.

Two groups of 12 and 14 adults recalled a series of sentences and of 5 words. The sentences were conceived to induce an attraction effect during the agreement by varying the number of N1 (S/P) and the number congruency between N1 and N2 (SS, PP, SP, PS). The lexical frequency of the words and the semantic relationships between N1, N2, V were controlled. The type of sentences and the cognitive resources in Working Memory were manipulated. The first group of participants listened and recalled first a sentence and, secondly, a series of 5 words (non-load condition). The second group heard the sentence followed by the 5 words, before recalling them successively (load condition). The written production of the sentences was recorded using “Eye and Pen” (Alamargot, Chesnet, Dansac, & Chesnet, 2006). The pauses and rates associated to N1, N2, V were computed. The information gazed during the production of the verb was assessed analyzing eye movements.

Analyses of pauses (before phrases and verb) and rates (phrases and verb) show that the agreement processing (singular vs. plural), engaged early (during the prewriting pause), continues during the production of N1 and N2. The systematic increase of production time in singular condition, under secondary task, could be due to a strategy consisting in checking for the presence of a plural after N1 (when singular – i.e. SP) or before N2 (when singular – i.e. PS), avoiding permanently attraction errors (SP, PS). Moreover, analysis of eye movements show that a final control of agreement is made during the production of the verb, leading to an increase of regressive fixations on N1, in SP and PS conditions, under secondary task. The regressive fixations on N1 during the production of the verb seem to represent a decisive process in the control of the agreement, limiting attraction errors. Implications for further research as the role of the inflexion phonology and of the semantic plausibility will be discussed in conclusion.

✉ carmen.petronea.paduraru@univ-poitiers.fr



## **Symposium**

### **Writing Difficulties In Children With Specific Language And Motor Disorders**

Anna Barnett

Oxford Brookes University, UK

Many children struggle with the complex task of writing but children with specific learning or developmental difficulties are especially prone to writing difficulties. These children have primary problems in specific domains of development, although their overall development and intellectual ability are typically within the average range. This symposium focuses on children who have difficulty producing and understanding oral language, often referred to as Specific Language Impairment (SLI), children who have difficulties with reading and spelling, diagnosed as Dyslexia and those with motor problems, Developmental Coordination Disorder (DCD). With contributions from the UK, Israel and the USA, this symposium takes an international perspective in attempting to understand the writing difficulties of children with these three disorders. The four papers provide insight into the difficulties these children face and help to elucidate the nature of the underlying cognitive, language and motor processes involved in their written text production. Research in this field will assist in developing effective interventions and support for these children in the classroom and also ultimately enhance our understanding of all children's writing development.

A cognitive model of writing provides a useful framework when attempting to understand the difficulties experienced by children with developmental disorders. Children's writing develops within a limited working memory capacity system (McCutchen, 2000; Swanson & Berninger, 1996). This means that children have to gradually automate low-level processes (e.g. translation skills such as handwriting and spelling) so that resources can be freed up for more cognitively demanding and complex processes (Fayol, 1999). It is increasingly accepted that existing models of skilled writing do not account for all aspects of writing development (Berninger, Fayol, & Alamargot, 2011) and that a separate model is needed to understand the handwriting component (Van Galen, 1991; Kandel et al., 2009).

The investigation of writing development in populations with developmental disorders is complex, with many potential causes of their difficulties. Studies need therefore to include comprehensive assessment of different aspects of writing skill and associated language and literacy measures. There is also much debate about the definition of terms and reliability of methods used by researchers. For example, terms like fluency and automaticity are frequently used to describe writing performance, yet these are difficult to operationalise. Recently, digital writing tablets have helped in this respect and examples are seen in papers in this symposium. The choice of writing tasks is also difficult and a variety can be seen in this symposium. These range from short copying tasks, allowing for the detailed analysis of particular features, to longer compositional tasks that are similar to those carried out in the classroom. Writing research

generally is beginning to span different languages and in this symposium we include two papers on handwriting in children with DCD that can usefully be compared. One is from Israel using Hebrew, the other from the UK using the Latin alphabet.

When studying special populations such as SLI, Dyslexia and DCD, researchers encounter further methodological issues (Hulme & Snowling, 2009). For example, there is much discussion about differential diagnosis and co-morbidity. Children with SLI can present with symptoms that can lead them to be classified as children with Dyslexia at later points in development (Bishop & Snowling, 2004) and many children with Dyslexia also meet the formal criteria for DCD (Kaplan et al, 1994). This presents a serious challenge for researchers in selecting participants, interpreting results and comparing populations. One way to address the long-standing debate about whether observed differences between clinical and typically developing groups are best understood as 'delay' or 'difference' is to include an ability match group in the study design, as illustrated in two of the papers in this symposium.

Poor writing is a barrier to educational progress for all children, but especially for those with the types of developmental disorders mentioned above. These children find it difficult to do well in school exams that are traditionally weighted toward assessment based on producing, often extended, written responses. There are many pitfalls and difficulties associated with carrying out research with children with difficulties. However the benefit of considering developmental difficulties in special populations outweighs these difficulties and, of course, is necessary in order to better meet these student's educational needs.

#### **Discussant**

Virginia W. Berninger

University of Washington, US

## **Written language skills in children with Specific Language Impairment**

Gareth Williams, Rebecca Larkin, & Samarita Blaggan  
Nottingham Trent University, UK

In previous research, children with specific language impairment (SLI) have been shown to have different profiles of writing ability compared with typical peers (Bishop & Clarkson, 2003; Dockrell, Lindsay, Connelly, & Mackie, 2007; Dockrell & Connelly, 2009). In this study, an age matched design was used to investigate the writing skills of children with SLI compared with chronological age matched children and a, younger, spelling age matched group. Fifteen children with SLI, 15 chronological age matched children, and 15 spelling age-matched children, between six years five months of age and 10 years seven months of age, took part in a study that looked at a range of writing measures along with literacy and language skills. In comparing the groups on measures of writing alone, there were few differences. However, the patterns of association between the writing measures and the literacy and language skills for the groups differed and this suggested that the three groups drew upon different skills in achieving the aims of the writing activity. The findings are discussed with reference to whether SLI is a delay or a deficit in ability, the not-so-simple view of writing (Berninger and Winn, 2006), and the implications of the findings for education.

✉ [gareth.williams@ntu.ac.uk](mailto:gareth.williams@ntu.ac.uk)

**Children with dyslexia are slow writers because they pause more often  
and not because they are slow at handwriting**

Emma Sumner, Vince Connelly, & Anna Barnett  
Oxford Brookes University, UK

Dyslexia is a developmental disorder characterised by difficulties with reading and spelling acquisition. It is commonly assumed that children with dyslexia are slower at handwriting and that the quality of their writing is much poorer than their peers (Gregg, Coleman, Davis & Chalk, 2007; Rose, 2009). However, evidence of slow handwriting in children with dyslexia is very mixed. The aim of this study was to assess speed of writing a text in a sample of English children with dyslexia. 31 children with dyslexia, mean age of 9 years, were compared to both age-matched children and younger spelling-ability matched children. Participants completed a free writing task on the surface of a digital writing tablet. Temporal characteristics were analysed using Eye and Pen software. The results show that the quality of written compositions by children with dyslexia was poorer than their age-matched controls. Children with dyslexia wrote fewer words per minute than peers when composing their texts and made a high percentage of spelling errors. Crucially, no differences were found between children with dyslexia and their same-age peers for speed of handwriting execution, measured by the tablet. However, children with dyslexia were found to pause within their compositions as often as a spelling matched ability group. Thus, our findings reflect that handwriting execution is not impaired in children with dyslexia. The slow writing that is typical of children with dyslexia is due to pausing more often when composing and is related to spelling ability. The findings are explored in relation to current theoretical models of writing development (Berninger & Swanson, 1994). Future research should aim to examine the execution of the writing processes of this population, in the hope of a better understanding of their writing profile and leading to appropriate intervention for these children.

✉ [emma.sumner@brookes.ac.uk](mailto:emma.sumner@brookes.ac.uk)

**Handwriting features of children diagnosed with  
Developmental Coordination Disorder**

Sara Rosenblum  
University of Haifa, Israel

The act of handwriting presents difficulties for 6-7 % of elementary school children who are diagnosed as Developmental Coordination Disorder (DCD). Difficulties in the mastery of the mechanical demands of handwriting may interfere with the higher-order processes required for text composition.

The aim of this study was to compare the handwriting process and product characteristics of children with DCD to those of controls in order to determine the best means of differentiation between the groups.

Participants included 40 children, from 7 to 10 years old. The experimental group consisted of 20 children who met the criteria of DCD, and the control group consisted of 20 age- and gender-matched typically developed (TD) controls. The children were asked to perform three graded writing tasks on an electronic tablet, which was part of a computerized handwriting evaluation system (CompET), in order to obtain measures of their handwriting process. The children's handwriting product was then evaluated by the Hebrew Handwriting Evaluation (HHE).

Results show significant differences between the groups for the handwriting process measures (e.g., In-air time, mean pressure) and for the handwriting product characteristics (e.g., global legibility, spatial arrangement). The discriminant analysis yielded a high significant discrimination (80-90 %) between groups.

Conclusions: An evaluation of both handwriting process and product characteristics among children with DCD provides a more comprehensive picture of their deficits. Using this method may enable practitioners to focus on children's main deficits and to tailor intervention methods so as to prevent writing deficits, academic underachievement and its consequences on their emotional well-being.

✉ [rosens@research.haifa.ac.il](mailto:rosens@research.haifa.ac.il)

**Handwriting speed in children with Developmental Co-ordination Disorder:  
A focus on free-writing and copying tasks**

Mellissa Prunty, Anna Barnett, Mandy Plumb, & Kate Wilmot  
Oxford Brookes University, UK

Developmental coordination disorder (DCD), is the term used to refer to children who present with motor coordination difficulties, unexplained by a general-medical condition, intellectual disability or neurological impairment. Difficulties with handwriting are often included in descriptions of DCD, including that provided in the formal classification scheme, DSM-IV (APA, 2001). Slow and poorly formed handwriting can lead to difficulties in the classroom and academic under-performance. However, surprisingly few studies have examined handwriting in DCD in a systematic way. Those that are available, have been conducted outside of the UK, in alphabets out with the Latin based alphabet (Rosenblum & Livheh-Zirinski, 2008). In addition, most work has focussed on very short tasks, usually copying, rather than longer 'free writing' tasks that are more common in the classroom. The aim of this study was therefore to compare handwriting performance in English children with and without DCD across three different writing tasks. In order to gain a better understanding of the nature of 'slowness' so commonly reported in children with DCD, an assessment of overall speed and quality of output was supplemented with a detailed examination of temporal elements of handwriting.

Ten 8-11 year-old English children with a diagnosis of DCD (in line with DSM-IV criteria) participated in the study, with 10 typically developing (TD) age and gender matched controls. Reading, spelling and receptive vocabulary were also assessed and children with dyslexia were excluded. The children completed two sentence copying and a 10-minute 'free writing' task from the Detailed Assessment of Speed of Handwriting (DASH) on a graphics tablet. The number of words written was recorded and Eye and Pen Software used to extract data on the amount of time actually spent pausing and writing during the different tasks.

Results from across the groups and the different handwriting tasks will be presented and implications for practice discussed.

✉ [mellissa.prunty-2010@brookes.ac.uk](mailto:mellissa.prunty-2010@brookes.ac.uk)

## **Finding a language: Metalinguistic understanding in teenage writers**

Debra Myhill & Susan Jones

University of Exeter, UK

This paper presents the findings from a nationally funded study, investigating the impact of embedded grammar teaching on students' attainment in writing and the development of their metalinguistic understanding. At the lexical, syntactical and textual level, writers are making multiple linguistic choices: some of these choices are implicit choices, shaped by previous social and literate experiences, but others are explicit, brought into consciousness and deliberated over. The construct of writing as design views linguistic choice as a discriminating selection process from a repertoire of possibilities, creating shades of meaning which align the unfolding text with the writer's design intentions. Janks (2009) makes the point that writers who have high levels of linguistic control are able 'to realise the meaning potential that language affords us. What is selected from the range of lexical and grammatical options determines how this potential is realised' (2009:131). Writing as design, therefore, involves both linguistic and metalinguistic competence. This paper will explore young people's thinking about design choices in writing through an analysis of their metalinguistic understanding.

The paper draws on data collected in interviews with 31 students aged 12-13, following observation of a writing lesson. Each student was observed and interviewed three times, once each for narrative, argument, and poetry writing. The interview probed students' ability to use grammatical metalanguage, their 'applied' understanding of how grammar constructions can create particular effects or impacts, and their ability to talk explicitly about language choices, including without metalanguage. Prior to the interview, each student was given a prompt text to read and on which to reflect. The data was analysed using Gombert's (1992) taxonomy of metalinguistic development as an initial framework. The analysis indicates that students' declarative knowledge of language, particularly metasyntactical and metatextual knowledge, is limited, but they are engaged in rich metalinguistic activity as a monitoring and regulatory function that accompanies the act of writing. The study is significant in extending understanding of metalinguistic activity to writers in the later stages of schooling and thus extending the conceptual framework of metalinguistic development beyond Gombert's oral model.

✉ d.a.myhill@ex.ac.uk

## **Adolescent literacies in a culturally-diverse context**

Alister Cumming

University of Toronto, Canada

This paper reports results from a project that analyzed the development of literacy over a school year among a cohort of 21 adolescents from culturally-diverse backgrounds who participated in an after-school community-based tutoring program at an economically-impooverished public housing complex in downtown Toronto. The project employed a range of complementary research and pedagogical methods to investigate literacy development from multiple perspectives: (a) as skills (i.e., assessed through conventional tests at the beginning and end of the school year on writing, reading, and vocabulary abilities along with strategy-oriented one-on-one tutoring following principles of dynamic assessment), (b) as social practices (e.g., social network analyses, stimulated recalls of writing and reading tasks done at school, checklists of environmental uses of literacy), and (c) as macro-societal forces (i.e., as a community-based initiative to overcome systemic barriers of poverty and cultural difference, and evidence of resistance related to the initiative) (cf. Dressman, Wilder & Connor, 2005; Luke, 2005). Results from these analyses, particularly cross-case analyses of in-depth, case studies of tutoring 8 learners over the school year highlight certain crucial factors, contexts, and challenges that either promoted or constrained the development of adolescents' academic literacies in this distinctly multicultural context: support from educators, community groups, families, and peers; approaches to pedagogy that engage learners' zones of proximal development in humanistic and purposeful ways; promoting students' strategies for self-regulation of their vocabulary, reading, writing, and learning practices; and fostering attitudes and orientations to literacy that engage students in epistemic purposes for using literacy to expand their knowledge, capitalize on multi-media resources, and bolster their self-confidence. These factors are potentially within the control of educational systems and therefore are significant for policy initiatives that can make a difference for adolescent learners at risk for literacy development and school achievement. Conceptualizing literacy development from multiple perspectives (as skill, practice, and macro-societal systems) and through complementary research methods is necessary to apprehend the multi-faceted nature of literacy, particularly for students from culturally-diverse backgrounds.

✉ alister.cumming@utoronto.ca



## The nature of error in high school student writing

Kristen Wilcox & Roberst Yagelksi

University at Albany, US

Over the past 100 years several studies have examined the nature and frequency of formal errors in American college student writing (e.g. Connors & Lunsford, 1988; Johnson, 1917). Most recently, Lunsford and Lunsford (2008) analyzed a national sample of college student essays and found that although there have been some changes in the specific errors commonly found in college writing, error rates have remained stable over time--contrary to popular belief. Together with research on writing across the curriculum (e.g. Carroll, 2002; Sternglass, 1997) these studies provide a general sense of common problems in college student writing. However, little research has been done on error in adolescent writing.

Given the ongoing debates about perceived problems in student writing achievement in recent years (see *Neglected R*), it is surprising that so few studies have investigated the nature of adolescent student writing in the way that college writing has been investigated. Despite the lack of empirical research, myths about the nature and sources of poor adolescent writing performance continue to inform public debate and educational policy-making. Yet little is known about the errors adolescent writers typically make. What are typical error frequency rates for native English-speakers and English learners? How do the nature and frequency of adolescent writers' errors differ across subject areas?

For the present study, the researchers analyzed 350 student essays written as regular assignments in English and social studies classes by 10th graders and 12th graders at ten high schools in five states in the U.S. Adapting procedures described by Lunsford and Lunsford (2008), the researchers analyzed the student essays for type and frequency of errors for each grade level and subject area. Error frequency rates in essays written by English learners were compared with those of native English speakers. Findings indicate that high school students generally make the same types of errors as college writers but at approximately twice the frequency. Differences were found in error rates between 10th and 12th grade students, across subject areas, and between native speakers and English learners. These findings raise important questions about the emphasis placed on formal error in mainstream writing instruction.

The presenters will describe the methods used in the study, share results and discuss implications for practice and policy.

✉ kwilcox1@albany.edu

**The relationship between the performances of Quebec first year high school students in French spelling and grammar, their metagraphical comments and their teacher's pedagogical practices**

Chantal Ouellet<sup>1</sup>, Anne Wagner<sup>1</sup>, France Dubé<sup>1</sup>, Élisabeth Boily<sup>1</sup>, Isabelle Gauvin<sup>1</sup>,  
Nathalie Prévost<sup>1</sup>, Catherine Turcotte<sup>1</sup>, & Danièle Cogis<sup>2</sup>

<sup>1</sup>Université du Québec à Montréal (UQAM), Canada

<sup>2</sup>Paris IV, France

For Quebec students, French spelling and grammar is a *bête noire*, due to the difficult and unappealing teaching methods employed by teachers, the complexity and multi-dimensionality of the subject (Catach, 1978) and the relationship between an insufficient mastery of written French and academic failure. This research project aims to analyze students' metagraphical abilities in order to determine whether those who are experiencing difficulties with French spelling and grammar adopt the same cognitive strategies as their more successful counterparts – though do so later – or whether they use different strategies. It does so by pursuing three specific objectives: 1) establishing the orthographical and metagraphical profiles of male and female students from the 6<sup>th</sup> grade, the first year of high school and from high school special education classes in four regions of Québec; 2) documenting their teachers' pedagogical practices; and 3) establishing and elaborating the links between the teachers' pedagogical practices and the students' spelling and metagraphical profiles. To this end, dictations were administered and interviews were carried out to solicit metagraphical comments on 12 words requiring grammatical agreement to a sample of students from these three grades. At the same time, their teachers' pedagogical practices were recorded by means of a log.

Orthographical and metagraphical performances from four 1<sup>st</sup> year high school classes, as well as their teacher's pedagogical practices, will be presented. When the four classes are analyzed together, correct orthographical forms appear to be related to certain types of metagraphical knowledge. Yet when each class is analyzed separately, the results seem to be linked to the students' linguistic, social and economic background as well as the teachers' practices in each class.

Because spelling and grammar errors are widespread in French, these findings will contribute to the body of knowledge on the question and will have repercussions for the plan of action to improve the quality of French teaching.

✉ ouellet.chantal@uqam.ca

## **Kindergarten's knowledge of literacy, teachers' practices and writing achievements at first grade**

Liliana Tolchinsky<sup>1</sup> & Loly Alonso-Cortés<sup>2</sup>

<sup>1</sup>University of Barcelona, Spain

<sup>2</sup>University of Leon, Spain

Early literacy development is central issue in current research and on the educational agenda. Increasing attention is being paid to beginning writing, as this is a crucial component of linguistic literacy. We focus on two components of writing: spelling and separation between words. *Spelling* relates to intra-word rules, while *separation between words* relates to the rules defining the boundaries of the inter-word domain.

The aim of the study was to identify child-related and contextual explanations of first graders' achievements in these two components of writing. Two hundred fifteen children from 32 classrooms in socioeconomically diverse schools were tested first in kindergarten and afterwards in first grade in both monolingual and bilingual communities in Spain. They were native speakers of Spanish in the monolingual communities and bilingual Spanish /Catalan or Spanish/Euskara speakers in the bilingual communities. Participants were assessed on general level of literacy, knowledge of vocabulary, phonological awareness, knowledge of letters, word and sentence writing in kindergarten and on word and sentence writing at the end of first grade. Age of entering kindergarten, and level of education of the parents were also taken into account. The considered contextual variables were school SES, type of community in which children were schooled and teaching practices for early literacy teaching. Results of a multilevel analysis revealed that spelling achievements at the end of first grade were uniquely explained by knowledge of letters in kindergarten, education of the parents, school SES and type of community -monolingual or bilingual. In contrast, the ability to separate words within a sentence in first grade was uniquely explained by level of writing, knowledge of vocabulary and parents education. None of the contextual variables had a main effect on this ability. Against predictions there was not a direct link between teaching practices and children achievements, rather the effect of teaching was mediated by a number of child and other contextual variables. Findings highlight the complexity of explaining children's achievements even in well-defined and restricted domains of knowledge such as spelling and separation between words.

✉ ltolchinsky@ub.edu

**Early literacy and the distinction of drawing and writing in preschoolers:  
A longitudinal study on German children**

Rita Schneevoigt

Leibniz University Hanover, Germany

International research shows that children's development of writing abilities starts before they enter school and are formally taught to write. There is empirical evidence for three stages of emerging literacy implicating a development from "undifferentiated script" to letter skills (Ferreiro & Teberosky, 1982; Tolchinsky, 2004). Although internationally replicated, this issue has been scarcely studied in German children.

The current longitudinal study examines the development of preschool children's concept of writing and their distinction between the drawing and writing domains over a period of one year. It is designed to integrate qualitative and quantitative approaches while evaluating the process of drawing and writing as well as the resulting products.

50 three-to-six-year-old German speaking children with either German or Turkish mother tongue were videotaped resolving writing and drawing tasks at three times. In the sense of the microgenetic method the writing and drawing processes of this sample were analysed to define criteria which serve to group the products of the two domains along their outer appearance and to indicate developmental changes. A subsample of 16 children was interviewed (audiotaped) on their understanding of script. This subsample will be undertaken a qualitative analysis as case studies to elucidate preschoolers' concepts of script and writing and to characterize pathways of their development. The statements of the children serve to reveal children's approach to script and their strategies to resolve unknown writing tasks.

Corresponding to literature the quantitative analysis confirms that even the youngest children differentiate between drawing and writing. For the given tasks, all of the children showed different products when asked to write, or draw, respectively, a certain object. None of the children knew the correct spelling of the words, but with increasing age the children seem to be more conscious of their (restricted) abilities and show less willingness to do the written part of the task. In this paper, quantitative results will be shown, which demonstrate how the depiction of script is changing over time. In addition, by means of one exemplary case study, the qualitative analysis of the development of a child's conception of script will be shown in detail.

✉ [schneevoigt@psychologie.uni-hannover.de](mailto:schneevoigt@psychologie.uni-hannover.de)

## First-grade teachers' practices concerning writing instruction

Sérgio Gaitas & Margarida Alves Martins

ISPA – Higher Institute of Applied Psychology, Portugal

In order to orchestrate effective and appropriate instruction, first-grade teachers have to focus different aspects: phonological and phonetic awareness, vocabulary, fluency and comprehension (Nunes & Bryant, 2004; Pressley, 2005; Pressley, Graham, & Harris, 2006; Snowling & Hulme, 2005) with different units and materials of written language (Jasmine & Weiner, 2007; Roberts, 2006). The eternal question is which aspects should we favor?

A reoccurring source of contention, involves the role of instruction emphasizing the systematic teaching of skills versus emphasizing incidental and informal methods of learning (Adams, 1990; Baumann et al., 2000; Ehri, Nunes, Stahl & Willows, 2001; Fijalkow & Fijalkow, 2010, 2011; Fijalkow, 2003; Goodman, 1992). These two main approaches (phonics vs. whole language or skills vs. process) have been the basis of much research on literacy teaching (Treiman, 2001).

More recently, a balanced perspective has emerged. This perspective recognizes the importance of learning some skills (e.g. learning to sound out words, learning how to plan, draft, and revise) and other language competencies stimulated by discovery opportunities (Chauveau & Chauveau, 2001; Graham, 2006; Pressley, 2002, 2006; Pressley et al, 1992).

In this context we aimed to describe typical teacher's classroom instructional practices in writing acquisition in the first grade. The participants in this study were 851 first grade teachers (91% female) from across Portugal. The survey used in this study, adapted from Fijalkow and Fijalkow (1994; 2003), consisted of forty questions that asked about frequency of use of different procedures concerning writing instruction. Teachers responded using a four points scale: a) Never; b) rarely; c) sometimes; and d) often.

Three independent structures of practices have been revealed from an exploratory factor analysis. The frequency of use reported by the participating teachers was as follows: a) traditional copies and dictates; b) students dictates to teachers; and (c) producing texts. Although, despite this global order, there was considerable variability between teachers in how often they used specific practices.

A hierarchical clusters analysis showed four different groups of teachers that differed in their teaching approaches. Some classrooms observations were made in different groups to describe more deeply the classroom practices.

✉ [sergiogaitas@gmail.com](mailto:sergiogaitas@gmail.com)

### **P1-I: Spelling abilities in French-speaking children with Language Impairment**

Lucie Broc<sup>1</sup>, Thierry Olive<sup>1</sup>, Josie Bernicot<sup>1</sup>, Monik Favart<sup>1</sup>, & Judy Reilly<sup>2</sup>

<sup>1</sup>Université de Poitiers & CNRS, France

<sup>2</sup> San Diego State University, US

Children with Language Impairment (LI) show difficulties in language development, but whether these difficulties are homogeneous across different sub-domains of language is still in debate. For instance, the few studies on writing note continued problems with spelling and morphology; but these studies are primarily in English. French morphology is richer, often silent, thus posing high challenges for writing.

In the present study, we investigated spelling abilities of French-speaking LI children (ages 7-11) and adolescents (ages 12-17). Their performance was compared with that of a control group of typically developing (TD) children and adolescents. All participants composed a narrative and were dictated words (which included regular and irregular words and pseudowords). Lexical and morphosyntactic spelling errors were analysed and coded according to their phonological plausibility.

As regards lexical spelling, in the narrative, the LI and TD participants produced the same number of lexical errors per word, but LI participants produced more phonological unacceptable errors. In the word dictation task, the LI group produced more errors per word than the TD group, particularly with irregular words and pseudowords, and these errors were mainly phonologically unacceptable. This was observed in LI children but not in LI adolescents. As regards morphosyntax, the LI group produced more errors per word than the TD group. In both groups, phonologically acceptable errors were the much more numerous, and they decreased with age.

In sum, LI participants' spelling difficulties were different in the two tasks: compared to the dictation task, the narrative task led to less spelling errors, presumably because children could select words they could process more easily. Therefore, although the LI participants and particularly children had phonological difficulties with lexical spelling, they were capable to adapt their linguistic register to the situation.

✉ lucie.broc@wanadoo.fr

**P2-1: The development of spelling and punctuation and its relation to reading and self-regulation: A longitudinal study of 6-8 year old Icelandic children**

Rannveig Oddsdóttir, Hrafnhildur Ragnarsdóttir,  
Freyja Birgisdóttir, & Steinunn Gestsdóttir  
University of Iceland, Iceland

Learning writing conventions is an important part of writing development. A well-written text must be correctly spelled and follow other writing conventions, such as punctuation. A number of studies have examined the development of children's spelling and punctuation and its relationship to reading and language development. In recent years there have also been a few studies relating writing to self-regulation. Nonetheless, there is shortage of studies exploring this development during the first years of schooling, especially among children learning transparent orthographies, such as Icelandic. The purpose of this longitudinal study was to explore the relationship between spelling and punctuation in Icelandic children's writing and investigate the longitudinal predictive role of reading, language and self-regulation in the acquisition of these skills. Forty-four Icelandic children in first grade were followed up for three years. The predictive measures were administered in first grade and included assessments of self-regulation, emergent literacy skills (phonological awareness and letter knowledge) and vocabulary knowledge. The outcome measures included assessments of spelling and text writing abilities and were administered in first, second and third grade. Significant correlation was found between the children's spelling of single words and their spelling in continuous written text at all three school years and this correlation got stronger every year. The relationship between single word spelling and punctuation only reached significance in third grade, whereas the correlation between spelling in text and punctuation was significant in all three school years. The emergent literacy measures were strong predictors of spelling, but did not predict punctuation ability. Vocabulary predicted spelling ability in grade 3, but had no predictive relationship with punctuation. Self-regulation affected spelling ability at all three levels and was the strongest predictor of both spelling and punctuation in third grade. However, when the effect of age and spelling ability in first grade were controlled for, the predictive role of reading ability, vocabulary and self-regulation were no longer significant. The overall results suggest that learning spelling and punctuation may well depend on different underlying skills. As expected, reading ability seems to be the major foundation for spelling, but none of the above factors was found to have strong or constant effect on punctuation. The overall results also suggest that the relationship between spelling and punctuation changes and gets stronger as children's writing ability increases.

✉ rannodd@hi.is

**P3-I: Spelling acquisition: A cross-linguistic comparison between  
Portuguese and Spanish first graders**

Ana Sucena<sup>1</sup>, Francisca Serrano<sup>2</sup>, São Luís Castro<sup>3</sup>, & Sylvia Defior<sup>2</sup>

<sup>1</sup>Instituto Politécnico do Porto, Portugal

<sup>2</sup>Universidad de Granada, Spain

<sup>3</sup>Universidade do Porto, Portugal

This study compares the early development of cognitive processes involved in spelling acquisition in Portuguese and Spanish. Although both are Romance languages, Portuguese orthography is deeper than the Spanish one and therefore Portuguese-speaking children are faced with more difficulties in literacy acquisition than Spanish-speaking children who learn a comparatively shallower orthography (Seymour, Aro & Erskine, 2003; Serrano et al. 2010). Accordingly, previous studies have found significant differences between the two orthographies in the reading acquisition process (e.g.; Defior, Martos & Cary, 2002). In this study, the focus is on spelling acquisition. 23 Portuguese-speaking and 29 Spanish-speaking first graders were asked to spell one-to-one phoneme-to grapheme mapping words, and words with one complex grapheme. Children were tested at the end of the second trimester.

One-to-one words may be accurately spelled on the basis of the alphabetic strategy, whereas complex graphemes may only be spelled if the child has already developed more complex strategies. Spanish children spelled complex words significantly better than Portuguese children, thus indicating a faster development of orthographic strategies. In this study, we will focus on the error analysis for complex words. Five categories were created to classify incorrect responses: refusal (refusal to answer); one-to-one (the complex grapheme was not spelled; only one-to-one graphemes were accurately spelled); phonological (phonological error in the complex grapheme spelling); non-related (the complex grapheme was inaccurately spelled, the error is not phonologically or orthographically related). Results are coherent with the Orthographic Depth Hypothesis, as (i) Portuguese children revealed a lower percentage of correct responses than Spanish children, and (ii) Spanish children revealed a greater percentage of phonological errors than Portuguese children, thus confirming that children learning to spell in shallow orthographies acquire the foundations for spelling faster than children learning to spell in deeper orthographies. Results will be discussed within the Foundation Literacy theory, proposed by Seymour (1999).

✉ [sucena.ana@gmail.com](mailto:sucena.ana@gmail.com)



**P4-I: Spelling development in the Spanish Language across different countries:  
Spain, México and Chile**

Isabel O'Shanahan & Juan E. Jiménez

University of La Laguna, The Canary Islands

This study focused on spelling development in Spanish children from elementary grades. Many languages with alphabetic orthographies vary in their spelling regularity (i.e., the direction of letter sequence to phoneme predictability). Spanish orthography shows a significant asymmetry between the spelling and reading transparency. For example, the orthography-phonology (reading) mapping can be more reliable than the mapping for phonology to orthography (spelling). Some phonemes can be represented by more than one grapheme and some graphemes can represent more than one phoneme (i.e., inconsistent graphemes). In this sense, it has been suggested that Spanish is more transparent in the direction grapheme-phoneme than in the phoneme-grapheme direction. There are inconsistent phoneme-grapheme relationships because a phoneme can be represented by several graphemes but there is no phonological rule that specifies the appropriate grapheme for the correct word spelling. An initial sample of 1193 children (618 male, 575 female) was selected from 3rd to 6th grade belonging to state schools from the Canary Islands (Spain), Guadalajara (México) and Concepción (Chile) with an age range between 7 and 12 years old ( $M = 122.34$ ,  $SD = 14.3$ ). We administered a standardized writing test that includes diverse subtest to assess spelling, non ruled and pseudowords. We calculated the average of correct spelling in each variable and school level. We found a significant interaction between country and school level for ruled and non-ruled spelling, however this not the case for writing of pseudowords.

✉ [ioshanah@ull.es](mailto:ioshanah@ull.es)

### P5-I: Assessing fluency in L2 writing

Åsa Palviainen<sup>1</sup>, Paula Kalaja<sup>1</sup>, Katja Mäntylä<sup>1</sup>, & Ari Huhta<sup>2</sup>

<sup>1</sup>Department of Languages, University of Jyväskylä, Finland

<sup>2</sup>Centre for Applied Language Studies, University of Jyväskylä, Finland

In recent years, the CAF model has had great influence in L2 language testing and assessment. However, in L2 writing, two of the components of the model – complexity and accuracy – have been paid much more attention than the third one – fluency. Yet, evaluating fluency is an inevitable part of L2 writing assessment. Fluency in L2 writing can be understood in two ways: fluency of written texts (i.e. if a text makes fluent reading) or fluency of the writing process (i.e. if the production of a text was fluent). Traditionally, fluency measures have been based on the former understanding and built on text products. In contrast, fluency in the writing process is still an under-investigated area of research and the potential relationships between fluency in text, on the one hand, and fluency in the writing process, on the other, remain to be explored. Keystroke-logging techniques make it possible to examine and measure fluency of the writing process.

In our study we wanted to find out what the L2 writing process was like – depending on writers' proficiency in the L2. More specifically, we wanted to explore the possibility of using fluency measures as descriptors of different proficiency (CEFR) levels. We asked two groups of university students, one studying Swedish ( $N = 21$ ) and another English ( $N = 31$ ) as their L2, to write two texts: a narrative and an argumentative text based on their personal experiences or opinions. The data was collected using the keystroke-logging program Scriptlog as software. The fluency of the writing process was measured by fluency, burst and fluency during burst (Lindgren et al. 2008). The students' proficiency in either Swedish or English was measured by assessing the texts produced using the CEFR (Common European Framework of Reference) six-point scale, ranging from A1 to C2.

Statistical analyses showed that there was an overall improvement in fluency across proficiency levels. However, L2 played an important role: Fluency was related to proficiency levels in Swedish, whereas it was not for English. These results suggest that the relationships between writing fluency, L2 and proficiency are complex and that fluency measures should be used with caution in assessment procedures.

✉ asa.palviainen@jyu.fi

**P6-I: Testing the temporal accuracy of keystroke logging using the sound card**

Johan Frid<sup>1</sup>, Åsa Wengelin<sup>2</sup>, Victoria Johansson<sup>1</sup>, Roger Johansson<sup>1</sup>, & Mikael Johansson<sup>1</sup>

<sup>1</sup>Lund University, Sweden

<sup>2</sup>University of Gothenburg, Sweden

During recent years writing research has seen an increased use of keystroke logging as a research method. Keystroke logging programs log the writing process in a continuous and non-obtrusive way, without interrupting the activity underway or increasing cognitive load. They enable researchers to collect very fine-grained online data because they log every keystroke in relation to a timestamp (in milliseconds), which indicates the time that a specific key was used. However, for the researcher interested in for example word-internal processing it's important to know the degree of precision and accuracy that can be achieved by the program.

We propose a method of measuring the accuracy of keystroke timestamps using a recording of the sounds made by key presses. Sound cards fit the purpose well since they typically have much better temporal resolution than computer keyboards and they are readily available in most computers, thereby minimizing the need of experimental equipment. Keypresses produce noise patterns that are easily temporally located in an acoustic waveform. The timestamps of the noise patterns can then be compared with the corresponding timestamps reported by the keystroke logging program. Specifically, the differences between the two timestamps of each keystroke, provides an estimate of the accuracy of the program.

We tested the accuracy of different keystroke loggers, including the latest version of ScriptLog and two prototypes of a new ScriptLog version implemented in C++ and Java respectively. Due to the increased use of web-based written communication another keystroke logger was implemented in Javascript, and run through a recent version of Firefox. Each test case consisted of 50 key presses of the 'space' bar, and was run on identical hardware and operating system. The tests showed that the best prototype gets a sd of 3ms and maximum difference of 7ms, whereas ScriptLog gets a sd of 5ms and maximum difference of 12ms. This implies that a re-implemented version will provide improved timing accuracy but more important is perhaps that this method can be implemented as part of any keystroke logging program in order for the user to test the accuracy of the program in his/her own computer environment.

✉ johan.frid@ling.lu.se

**P7-I: Working memory and pause patterns in the writing of  
teenagers with hearing impairment**

Lena Asker-Árnason, Emily Grenner, Victoria Johansson, & Birgitta Sahlén  
Lund University, Sweden

Background. Many children with hearing impairment (HI) do not develop language in a typical way. Even when early problems are resolved, difficulties with complex language tasks, such as narrative telling/writing often persist.

According to earlier findings, adolescents with cochlear implants use a significantly higher percentage of pause time compared to the adolescents with normal hearing (NH) in their narrative writing. One explanation for this finding might be limited working memory capacity. According to the resource-sharing hypothesis (Daneman and Carpenter, 1980), the more automatized the lower processes (spelling, finding the right key on the keyboard), the more room is left for the higher processes (structuring the elements of the story, creating sentences with a variation in the choice of words).

Research questions. Are there any differences in pause patterns between teenagers with HI (with cochlear implants, CI or hearing aids, HA) and teenagers with NH according to location, number or length of pauses? Is there a relation between the observed pause patterns and the participant's working memory (WM) capacity?

Participants. Thirteen teenagers with HI (six with CI and seven with HA) and thirteen age matched teenagers with NH. The age range was 14-18 in all three groups.

Method. The narrative writing products (Frog stories) were collected and analyzed by means of keystroke-logging. The pauses were coded as either initial, final, (before and after clauses) word-internal, clause-internal or editing pauses, and the pause time was noted. General WM capacity was assessed by means of the CLPT (competing language processing task). The participants were asked to judge whether an increasing number of sentences were semantically acceptable and then try to remember the last word in the sentences.

Results. There were no significant differences between the groups for the WM capacity measure. Teenagers with CI generally made longer pauses and spent a larger part of the total pause time in final position than teenagers with NH and teenagers with HA. Both groups of HI made a larger number of pauses (in relation to text length). For the group of HI better WM capacity was significantly correlated to a lower percentage of pause time out of total writing time and to shorter pauses. The interpretation of the results is that the participants with HI become aware of and critical toward their writing difficulties with increasing age.

✉ [lena.asker-arnason@med.lu.se](mailto:lena.asker-arnason@med.lu.se)

**P8-I: Examination of student self-perception in academic writing**

Malgorzata Adams-Tukiendorf

English Department, University of Opole, Poland

Reflective thinking is a valuable skill worth developing in the course of tertiary education that may be enhanced by engaging students in reflective writing. The advantages of making students more aware of their process of learning and of their own strengths in that process cannot be denied. Nevertheless, some students may have a distorted self-perception visible in the way they write about themselves, which may be explained via the original self-perception theory (Bem, 1972) that asserts that an individual becomes conscious of own attitudes by observing own actions first, especially when the original attitude is weak or ambiguous. The theory also explains the attitude change based on self-observation of own actions. In other words, if one is not sure of what one thinks about a certain matter, he/she needs to experience this matter first and observe own reaction to it to be sure of own attitude. In the light of this theory, it may be inferred that students may form self-perceptions on the basis of their classroom performance strengthened by the feedback they receive from either the teacher or their peers. Being exposed to frequent negative feedback, they may form a schematic self-perception of the quality of their performance that is more negative than positive. The purpose of the presentation is to share results of a small-scale study into self-perception of advanced students of English (altogether 120 individuals) in reference to the quality of their academic writing. Students' texts were coded for accuracy in task performance, then a corpus was created to analyse the language they used when writing about their strengths. Frequency lists revealed that the majority of the students hold either negative or inconsistent self-perception in the context of academic writing although the reflective essay was designed to draw attention to their assets in writing. Implications of the study indicate the significance of feedback in developing one's self-perception in the academic context.

✉ [maadtu@poczta.onet.pl](mailto:maadtu@poczta.onet.pl)

## **P9-I: Teaching academic skills as an introduction to epistemological empowerment**

Wendy Smeets

Hotelschool The Hague, the Netherlands

This paper reports on a research project, which aims to challenge first year Hospitality Management students' epistemological beliefs with a view to helping them develop as writers and critical thinkers. The project involves an inventory of the students' beliefs followed by two teaching interventions. The objectives are to enable students to work more effectively on tasks involving multiple texts to achieve deeper understanding and produce written products with better referencing practices thus better equipping them for writing for assessment.

Students in Higher Education are required to carry out a great variety of hybrid reading and writing tasks including literature reviews, research reports, and dissertations. As Braten & Stromso (2004) point out, the linking of different texts is a complex process and is a challenge to most students. Within HE, students are confronted with primary and secondary sources; furthermore, the use of multiple digital sources increases the complexity of common learning tasks. Braten & Stromso (ibid) state that reading multiple sources is central in developing expertise in most academic domains.

The sample consists of the 2012 February cohort of first year Hospitality Management students ( $N = 95$  students). To assess our subjects' beliefs on knowledge and learning, the Epistemological Questionnaire for university students by Marlene Schommer (1998) was used. This 63-item questionnaire has been widely applied and validated and is seen as the best option for assessing students' beliefs (Braten & Stromso, 2006).

Schommer studied four factors namely simple knowledge, fixed knowledge, quick learning and certain knowledge.

Results indicate that the students ( $N = 95$ ) hold relatively mature beliefs, especially on whether learning is quick and authorities should be criticised. Notwithstanding, beliefs on the complexity of knowledge were still quite immature with students tending to seek single answers, avoiding integration and seeking to avoid ambiguity.

The first intervention focuses on critical reading whereas the second intervention focuses on critical writing and aims to familiarise students with the use of sources in their own writing. Preliminary results indicate that teaching interventions can indeed help students move towards more sophisticated epistemological beliefs.

✉ w.smeets@hdh.nl

## **P10-I: The textual dimension and its relation to writing**

Luís Filipe Barbeiro

Polytechnic Institute of Leiria, Portugal

The text is a unit that is particularly relevant to mediating our relation to writing. As the child gradually develops the ability to write, s/he does not immediately form a conceptual representation of text. Indeed, the text is a complex unit by virtue of the internal relations that hold among its constituent elements as well as the external relations that it establishes with other texts and with the world it represents or creates. In addition, texts present a wide range of structural diversity. In this paper, we analyze how the notion of textual unit is mobilized in pupils' reflections on the activity of writing. The study is based on a corpus of 375 written texts in which Portuguese pupils (3rd, 4th, 6th, 8th, and 9th forms) wrote about their text composition processes and about their relationship with writing, following the prompt "What happens when I write?" The analysis of the corpus accounted for the manifestation of the textual dimension in pupils' discourse. It was focused on the clausal units in which pupils refer to aspects at a textual level. Considering the number of clauses associated to textual parameters, it significantly increases from 3rd to 9th form, referring to parameters such as structure, text type, genres and subgenres, topic, title... This progression accompanies the overall growth of text length, and reveals an increasing capacity to focus attention on the macro-structural level of texts. With regard to genres, it is the story that takes pride of place, being in many cases regarded as the prototypical text. Besides story, though at a lower level, the diffuse category "composition" also has a significant presence, when students refer to the genres that they write. In the pupils' descriptions of text structure, the macro-categories introduction, development and conclusion become prominent. These macro-categories are applied not just to the product but also to the writing process, yielding an isomorphism between product and process. Sometimes this isomorphism is broken by the reference to the title, which can be created at the end of the process, and also by the activation of more extensive revision processes involving text rewriting.

✉ barbeiro@ipleiria.pt

**P11-I: Dictation to adults: A practice that is urgent in Portugal**

Maria Manuel de O. Santos<sup>1</sup>, Luísa Álvares Pereira<sup>1</sup>, & Paulina Ribera<sup>2</sup>

<sup>1</sup>Universidade de Aveiro, Portugal

<sup>2</sup>Universidade de Valência, Spain

A study, is currently being conducted as part of a doctoral programme and it aims to produce sustained theoretical and didactical knowledge to the development of early childhood text production, integrating both the teaching of the code and the introduction to text production.

This research aims to ascertain whether the “Dictation to the adults”, mediated by teaching sequences and interactive whiteboards, is susceptible of promoting students’ writing competence of different text genres and their (meta)textual conscience.

The study concretely aims to:

- understand how “dictation to the adults”, implemented through teaching sequences, can help promote first grade students’ knowledge of the parameters of various text genres;
- analyse the students-teacher interaction during the written production of several text genres, through the use of “dictation to adults”, mediated through the interactive whiteboard;
- analyse the production of each genre according to the work options of each of the chosen teaching sequences.

This investigation is a research-action one and its implementation consists of three research-action cycles, according to the procedures presented by McNiff & Whitehead (2006).

In the data analysis several techniques will be used: content analysis (Bardin, 2009; Guerra, 2006); discourse analysis (Adam, 2008; Bronckart, 2007); and, interaction analysis (Kerbrat-Orecchioni, 2006).

This poster will introduce some of the principles that justify the dictation to the adults’ relevance as a valuable didactic device for writing teaching. It will also present some data already collected during the intervention, namely some of the strategies used and the students’ productions. It will moreover highlight the need to integrate this didactical tool in the Portuguese teaching practices, particularly in the present educational context in which the new Portuguese programs are being implemented.

✉ s.salvador.ilhavo@gmail.com



**P12-I: Better writing in elementary education:  
Design principles for effective writing lessons**

Saskia Rietdijk<sup>1</sup>, Tanja Janssen<sup>1</sup>, Paul de Maat<sup>2</sup>, & Gert Rijlaarsdam<sup>1</sup>

<sup>1</sup>University of Amsterdam, the Netherlands

<sup>2</sup>CED-Groep Rotterdam, the Netherlands

Recent research by the Inspection of Education (2010) indicates that writing education in Dutch primary schools is of low quality. Yet, from educational research ingredients for effective writing lessons are available.

Educational developers (CED-Groep, Rotterdam) and researchers (UvA) intend to offer writing education in grades 4 and 5 a sustainable impulse. Sustainable by (1) linking the writing programme to a widely used reading programme, (2) hosting the development and execution of the programme in a well-known educational support organization and (3) supporting the new writing programme with training and coaching of teachers. The writing programme focuses, like the reading programme, on the acquisition of strategies.

Effects are studied by assessing the progress of 60 teachers over a period of 2 years. Three conditions are compared: a) the new writing-reading lessons including training and coaching; b) the new writing-reading lessons only, and c) the standard reading programme with standard writing tasks (control condition). Assessed are the instructional quality of the lessons taught and pupils' reading and writing skills. Teachers are interviewed as well and pupils will fill in a questionnaire on their writing preferences.

The first phase of the research project is focused on developing design principles for the new writing lessons. Design principles are formulated on the basis of a study of the research literature and on input from writing research experts. In our presentation we present an overview of design principles for effective writing lessons.

✉ [s.rietdijk@cedgroep.nl](mailto:s.rietdijk@cedgroep.nl)

**P13-I: The contribution of synopsis to analyze in-classroom teaching practices**

Luciana Graça & Luísa Álvares Pereira  
Universidade de Aveiro, Portugal

The research we have undertaken aims at describing and understanding changes both in the teaching practices and in the construction of an object (opinion text) as it is actually taught in the classroom. In fact, many studies on best practices analysis, on teaching effects and on teacher-student interaction have been conducted, but there is only few studies on what really happens in the classroom.

In order to evaluate and understand the potentially changing role of a new didactic tool, we designed a research, focusing on the teaching of writing of an opinion text in three 6th grade classes, that was implemented in two phases: i) in the first one, each teacher was to teach the opinion text according to their own planning, defining duration and possible materials to use in the classroom; ii) in the second phase, the teacher was now to teach the same subject, and again establishing duration and the materials to use, but also making use of a new didactic tool provided by the researcher: a didactic sequence. We have captured the mini-DV cassettes images and created MPEG files for each lesson in order to transcribe data using TRANSANA software. Naturally, the large amount of filmed data collected required the use of a specialized methodological tool to facilitate the analysis and the comparison of data from the different teachers involved.

Synopsis, a methodological tool developed by the GRAFE group, from the Faculté de Psychologie et des Sciences de l'Éducation of the Université de Genève, was the chosen tool. Adapted according to the specific interests of our PhD project - developed in the theoretical guidance of the PROTEXTS research group -, the synopsis allowed to condense the data into a single reasonable sized unit, that could be apprehended and thus permitting the comparison and analysis between diverse teaching sequences about a specific teaching object.

Our contribution intends to present in detail the before mentioned methodological tool by: i) describing the main conceptual references of the theoretical framework, ii) presenting a description of the methodological tool itself, and iii) summarily reporting a part of the results obtained in this research using the synopsis.

✉ luciana.luciana.28@gmail.com



**Thursday, July 12**

**16:30 – 17:30**

*Main Auditorium*

## **KEYNOTE LECTURE**

### **Modeling and Remodeling Writing**

**John R. Hayes**

**John R. Hayes** is professor of psychology at Carnegie Mellon in Pittsburgh, Pennsylvania (USA). Engaged in writing research since 1979, he has been concerned both with the creation of frameworks to describe the global organization of the cognitive and affective aspects of writing and with the analysis of specific writing issues. He and his colleagues have created models for sub-processes such as planning and revision, applied think-aloud protocols to clarify public texts, designed strategies for teaching revision to college freshmen, discovered how texts convey an impression of the writer's personality to readers, tested the reliability of teacher's evaluations of student texts, assessed technical writing instruction, evaluate the impact of linguistic experience in writing, and explored language bursts to identify bottlenecks in the writing process. Recently he has turned his attention to creating model of the writing processes of primary and secondary school writers—models that suggest a reinterpretation of Bereiter and Scardamalia's knowledge-telling model.



## Modeling and remodeling writing

John R. Hayes

Carnegie Mellon University, US

In *Section 1* of the keynote, the author discusses the succession of models of adult writing that he and his colleagues have proposed from 1980 to the present. He notes the most important changes that differentiate earlier and later models and discusses reasons for the changes. In *Section 2*, he describes his recent efforts to model young children's expository writing. He proposes three models that constitute an elaboration of Bereiter and Scardamalia's knowledge-telling model. In *Section 3*, he describes three running computer programs that simulate the action of the models described in Section 2.

✉ [jh50@andrew.cmu.edu](mailto:jh50@andrew.cmu.edu)



**Friday, July 13**

9:00 – 10:30	<b>Individual Papers</b> <i>Room 250</i>  <b>Chair: Castelló</b>	<b>Individual Papers</b> <i>Room 249</i>  <b>Chair: Spelman Miller</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Connelly</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Torrance</b>
9:00	Bazerman & Simon	Salvador, Albuquerque, & Alves Martins	Tolchinsky, Aparici, & Salas	Baaijen & Galbraith
9:30	Petric & Harwood	Alvarado, Fernández, & Vernon	Chenu, Jisa, & Mazur	De Smet, Brand- Gruwel, Leijten, & Kirschner
10:00	Russell & Tachino	Mata Pereira, Fijalkow, & Alves Martins	Brandão Carvalho	Nottbusch & Grabherr
10:30 – 11:00	<b>Coffee Break</b>			
11:00 – 13:00	<b>Symposium</b> <i>Room 250</i>  <b>Chairs: Fayol &amp; Berninger</b>	<b>Individual Papers</b> <i>Room 249</i>  <b>Chair: Coutinho</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Wengelin</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Leijten</b>
11:00	Berninger, Fayol, Hayes, Rijlaarsdam, & Alves	Cardoso, Álvares Pereira, & Oliveira	Schmitt	Nguyen, Rijlaarsdam, & Admiraal
11:30	Slusarczyk, Bressoux, & Fayol	Jeffery & Polleck	van Kruiningen & Jansen	Palviainen & Lahtinen
12:00	Arfé, Dockrell, Connelly, Walter, & De Bernardi	Elf	Spinillo	Gonçalves & Sousa
12:30	Alamargot, Paduraru, Flouret, Pontart, & Fayol	Wilcox & Jeffery	Silva	Van Waes & Leijten
13:00 – 14:00	<b>Lunch</b>			
14:00 – 16:00	<b>Individual Papers</b> <i>Room 250</i>  <b>Chair: Olive</b>	<b>Symposium</b> <i>Room 249</i>  <b>Chairs: Espasa &amp; Guasch</b>	<b>Individual Papers</b> <i>Room 247</i>  <b>Chair: Ragnarsdóttir</b>	<b>Individual Papers</b> <i>Room 246</i>  <b>Chair: Arfé</b>
14:00	Torrance & Oxborough	Strobl Ortoleva, Schneider, & Betrancourt Mauri & Onrubia Guasch, Espasa, Alvarez, & Kirschner	J. E. Jiménez	Pontart & Alamargot
14:30	V. Johansson & Gustafson		Jost, Knopp, Becker- Mrotzek, & Grabowski	Connelly, Dockrell, Walter, & Critten
15:00	R. Johansson, Wengelin, V. Johansson, & M. Johansson		Dimakos, Lavdas, Triantafyllaki, & Efthimiou	Wengelin, R. Johansson, & V. Johansson
15:30	Galbraith & Baaijen		Thygesen & Fasting	Oxborough & Torrance
16:00 – 16:30	<b>Poster Session II &amp; Coffee Break</b>			
16:30 – 17:30	<b>J. Hayes Lecture: R. Kellogg</b>			
17:30 – 18:00	<b>J. Hayes Award &amp; Closing Event</b>			





**Climbing on the shoulders: Evidence that referencing reading supports  
higher level thought expressed in writing**

Charles Bazerman & Kelly Simon

University of California Santa Barbara, US

The nexus of reading and writing is a longstanding focus of research (reviewed in Nelson 2008). Included in this research has been substantial examination of how writing depends on and includes reading, through specific forms of intertextual practice (Volosinov, 1973; Spivey, 1984; Bazerman 2004, etc.). Despite the general pedagogical believe that reading improves writing (though sometimes matched with the belief that explicit referencing can stand in the way of expression of thought), however, there has been little research into whether these intertextual practices in fact affect the quality of thought expressed in writing (though there is now strong evidence of the inverse, that writing improves reading; see Graham and Hebert 2010).

In analyzing the data from a study examining the cognitive effect of writing in particular educational genres in a post-graduate teacher preparation program, although we were not explicitly looking for impact of referencing and citation practices, we began noticing evidence of a strong effect that mention or discussion of another author had on the thoughts expressed in the student writing. To our original analysis of the cognitive level of statement (evaluated according to a rubric we developed specific to the intellectual goals of the program the students were enrolled in), at every episode in the vicinity of every work cited, we added further codes to indicate the form and effect of the representation of the code, distinguishing between quotation, summary or mention of the cited contents as well as how the cited material was then used within the writer's own argument. Our reanalysis revealed that in almost every instance, when the students cited or discussed a statement from their reading one of two things happened. In some cases, the statements incorporating the reference and sometimes immediately following were at a higher level of sophistication (according to the program goals) than the surrounding text and than in other texts written by the students at about the same point in time. In the other cases, the references and discussion were part of already high thought-level texts, usually in the form of reviews of literature. Moreover, references to reading also serve as a leading indicator of students' development over time as well as of students whose thinking at any moment in time appears more sophisticated than those of the classmates. When we examine the details of six different cases we find patterns that further confirm these hypotheses and elaborate variations in the ways in which students internalize theoretical perspectives gained from their reading.

✉ bazerman@education.ucsb.edu

**Citation functions, task requirements and task representation: An interview-based study of the citing behaviour of a successful second-language writer**

Bojana Petric & Nigel Harwood

University of Essex, UK

This presentation reports the findings of a qualitative study, which used the discourse-based interview approach (Odell et al 1983) to investigate the citation behaviour of a successful non-native postgraduate student in the discipline of management, Sofie. We compare the rhetorical functions of citations in two pieces of Sofie's writing, written in response to two different assignment tasks in two management modules Sofie attended: (i) a directed task, accompanied by detailed lecturer guidance on core and advanced readings, and (ii) an open task, allowing students the freedom to select their own topic. Although both tasks required source-based writing, they differed considerably in terms of the level of direction provided and the level of specificity of task requirements.

The findings show that some of the citation functions Sofie described were the same in both assignments. For instance, Sofie used citations in both assignments to define terms and support her arguments. However, we also identified task-specific citation functions. For instance, while Sofie reported that the majority of the citations in her assignment for the directed task were used to apply citees' terms or concepts to her own analysis, such citation functions were not generated by the open task. Conversely, Sofie reported using citations to show the relevance of her chosen topic in response to the open task only. The two assignments also differed in terms of the frequency of the reported functions of citations. Sofie used citations to define terminology more frequently when responding to the directed task, while the open task led to a greater frequency of citations Sofie used to summarise citees' viewpoints. While these differences seem to suggest that task requirements affect citation functions, we also consider the impact of task representation, i.e., the way in which Sofie interpreted the two tasks to herself. We discuss how both task type and task representation impacted on Sofie's source retrieval and citation behaviour in the process of writing the two assignments. We conclude by discussing the implications of our findings for L2 writing instruction on source use.

✉ [bpetric@essex.ac.uk](mailto:bpetric@essex.ac.uk)

**Citing to learn: Analyzing citations in student arguments through an online,  
multi-media case study**

David R. Russell<sup>1</sup> & Tosh Tachino<sup>2</sup>

<sup>1</sup>Iowa State University, US

<sup>2</sup>University of Winnipeg, Canada

This study asks what effects differing rhetorical uses of citation in beginning university students' arguments may have on their cognitive development (Bazerman 2007).

An online multi-media case study (Fisher, 2006) was used in a three-week unit on research and argument in two sections of first-year writing at a large public U.S. university ( $N = 41$ , 92% L1). Students researched a biotechnology policy issue (NGO funding of a genetically modified organism, "Golden Rice") on a purpose-built website containing a variety of relevant multimedia materials. Students read and annotated the online materials, discussed the case in class and in online discussion forums, then wrote a letter to the Rockefeller Foundation recommending a policy on funding.

These letters all included specific scientific information from the sources provided. Information could thus be traced back to the source, most often references to percentages. All instances ( $n = 101$ ) of the word "percent" and its variations were coded as (1) makes same argument as the source (2) refutes source, (3) make a different argument, or (4) provides background information. Each letter was then coded globally as pro, qualified pro, neutral, qualified anti, or anti, and on the depth of analysis. A pre-post survey was administered to find changes in students' perceived knowledge of and attitudes toward biotechnology.

Results of the pre/post survey showed not only that students perceived themselves as more knowledgeable after the unit, but also more skeptical about biotechnology. Students rarely took neutral positions or qualified pro/con positions.

Analysis showed students mainly cited percent information to make the same basic argument as the source did (60 of 101 instances). Letters in which students did separate scientific information from the argument in the source (28 instances) showed deeper analysis of the issue globally. A cross analysis of the survey and citation data showed those students showed greater change in the direction of skepticism toward biotechnology, regardless of the position taken in the letter, and were more likely to take qualified positions.

The paper concludes by discussing ways research on the rhetorical uses of citation and its relation to student learning and development might speak to previous research on student citation.

✉ drrussel@iastate.edu

**A qualitative approach to an invented spelling programme with  
Portuguese pre-school-age children**

Liliana Salvador, Ana Albuquerque, & Margarida Alves Martins

ISPA – Higher Institute of Applied Psychology, Portugal

There has been a growing scientific interest in understanding the relations between the development of written language abilities and invented spelling activities. These activities have shown that pre-school-age children think and develop their own knowledge about writing, such as phonemic awareness and letter-sound knowledge, in some informal contexts of learning even before they attend school. Several studies in different languages, including Portuguese, have developed different intervention programmes involving invented spelling activities that were effective in making children evolve in the quality of their spellings. The experimental interventions developed in these programmes were drawn accordingly to constructivist principles, that is, set on children's discoveries inducing them to think about their own spelling when confronted with more evolved ways of spelling. In the line of these investigations our study's aim, being a part of an experimental study that explore the relations between an invented spelling programme and its impact on 120 Portuguese pre-school-age children's early writing and reading acquisition, is to explore the evolution of invented spellings during the programme, taking into account not only the quality of some children spellings before and after the programme but also their evolution throughout the sessions, their involvement in the tasks and the dynamics that occurs between the child and the researcher during the invented spelling program along the 10 sessions the programme lasted. We studied 12 five-year-old children. We analyzed their written and oral productions in the pre-test, post-test and during the sessions, the strategies they used in their spellings, as well as the interaction between those children and the researcher at different moments. It was possible to observe that the individual processes by which children evolve in their invented spellings, the strategies they use, their progresses as well as their spellings are not always identical or follow a regular path. For example, some children whose spellings were qualitatively equivalent at the beginning of the programme evolved to different levels of spelling at the end, and also children whose spellings differ at first had identical outcomes after the training program. Also, some children focus more on vowels while others use more often the consonants to represent the same words. In some cases, the progresses children make throughout the sessions are regular and consistent while in other cases those progresses are inconstant.

✉ li.fssalvador@gmail.com

## Phonemic discrimination and learning to write

Monica Alvarado, Norma Fernández, & Sofía A. Vernon

Universidad Autónoma de Querétaro, Mexico

Several studies highlight phonemic discrimination as a predictor for learning to read and write (Goswami, 2010; Jimenez, et. al 2010; Ortiz, et al, 2008). At the same time, it have been identified that phonemic discrimination is not completed until the 7th year of life (Treiman & Breaux, 1982; Snowling & Hulme, 1994), even though children can start reading at this age.

From a constructivist perspective of learning to write, some studies have reported the different meta-linguistic reflections about phonological aspects of language that children make when they have to write unknown words (Alvarado, 1997; Vernon, 2004; Calderón, 2010; Ferreiro, 2010). This paper focused on Spanish-speaking pre-school invented spellings, as a rich source for understanding their preliterate intuitions about phonological awareness, and established a contrast between children written responses with their possibilities in phonemic discrimination.

It was designed an oral test to evaluate Spanish phonemic discrimination according to voice and continuity features in an oral word recognition task. A writing task was also designed controlling these features of 8 dictated words. 45 Mexican pre-school children participated on both tasks during a single session.

Children writings were classified in Ferreiro & Teberosky (1979) terms to proceed with the analysis. Results point-out that: i) it was more difficult to children to discriminate voice than continuity feature; ii) even though children's discrimination difficulties, their invented spellings reflect their intention to represent at least syllables involved in the dictated words. iii) Most of the cases children written representations were made attending to vowels. When children represented consonants they corresponded to more continuing phonemes than with more voiced ones.

Those results help us to discuss the relevance of invented spelling tasks to study children phonological awareness as a usefulness context to elaborate meta-linguistic analysis. This is because phonemes need to be learned from letters (Goswami, 2010), not only while reading but making orthographic decisions through writing that conduct children to phonological judgments.

✉ monicalvarado@yahoo.com

### Didactics and syllabic spellings

Miguel Mata Pereira<sup>1</sup>, Jacques Fijalkow<sup>2</sup>, & Margarida Alves Martins<sup>1</sup>

<sup>1</sup>U.I.P.C.D.E., ISPA-IU, Lisbon, Portugal

<sup>2</sup>Université de Toulouse 2, le Mirail, France

Children's syllabic spellings have been understood as a psychogenetic manifestation (Ferreiro, 1988). In this type of spellings children establish a one-to-one correspondence between oral syllables and letters. Nevertheless recent research has raised some questions about the possibility of understanding children's syllabic spellings also as a pedagogical manifestation, depending on the type of didactics used in kindergarten classrooms (Fijalkow, Cussac-Pomel, & Hannouz, 2009).

The present study explores the impact of didactic practices on children's syllabic spellings, using an experimental design. 36 five-year-old Portuguese children participated. They were divided in 3 groups, equivalent in terms of their intellectual level, phonological awareness and letter knowledge: experimental group 1, comparison group and control group. Children's spellings were evaluated in a pre-, post- and differed post-test, using an invented spelling test. In between, children in the experimental group 1 underwent a didactic program consisting in 6 small-group sessions of 20 minutes each, designed to induce an analytical assessment and critical awareness and discussion of the syllables (segmentation, suppression, and identification) in regular words (cognitive effect). Children in the comparison group underwent a different didactic program in the same conditions, consisting in a classical didactic classroom task – reading stories (psychosocial effect). Finally, children in the control group stayed in the classroom. Results show that children in the experimental group produced significantly more syllabic spellings than the children in the other groups, both in the post-test and in the differed post-test. It seems that the didactic program implemented in experimental group 1 had a positive cognitive effect whereas the psychosocial effect of the didactic program proposed to the comparison group didn't. It is possible that syllabic spellings' are context-related, and that they can be induced by the didactics to which children are exposed during their learning process. Some guidelines for educational contexts will also be discussed.

✉ mmp@ispa.pt

## The development of syntactic complexity in written and spoken narratives

Liliana Tolchinsky<sup>1</sup>, Melina Aparici<sup>2</sup>, & Naymé Salas<sup>1</sup>

<sup>1</sup>Universitat de Barcelona, Spain

<sup>2</sup>Universitat Autònoma de Barcelona, Spain

Complexity is a yardstick in linguistic development. An increase in the level of syntactic complexity is a distinctive feature of later language development. It is diagnostic of discourse organization and writing quality, and a major indicator of language delay and impairment. In this sense, hypotaxis has been a preferred indicator of syntactic complexity. However, studies of syntactic development have typically avoided its assessment in functionally motivated discourse units, while the effect of specific communicational circumstances has been largely ignored.

The present study assesses the development of syntactic complexity in narrative text construction, as well as the effect of modality of production (spoken/written) on the development of such complexity. We examined two types of syntactic units: Noun Phrases (NPs) and clauses (CLs), and one discourse unit: Clause Packages (CPs), i.e., groups of clauses syntactically and thematically linked. NP complexity was defined as the ratio of relative clauses and prepositional phrases directly modifying the head noun. Clause complexity was defined according to the type of linkage between clauses, and calculated as the ratio of embedded clauses over all clauses in a given text. Complex CPs were those combining parataxis and hypotaxis; the average of such complex units over the total number of CPs was calculated. Our main goals were to determine (1) the effect of age and (2) modality in the development of syntactic complexity and (3) to evaluate whether global complexity (CLs and CPs) developmentally precedes local complexity (NPs). For this purpose, a corpus of 160 spoken and written narrative texts, produced by 80 native speakers of Spanish divided in four age groups (9-, 12, 16-year-olds and adults), was analyzed.

Results show that syntactic complexity increased with age in all units and modalities. However, complex CLs and CPs were produced by the 9-year-olds, whereas complex NPs appeared only after age 12. Unlike other linguistic domains, in which local complexity developmentally precedes global complexity, in syntactic development the order is reversed. The modality of production interacted with both the type of unit and participants' age, suggesting that syntactic development should be viewed in the light of modality of production, and that the role of writing as a platform for increasing syntactic complexity should be underlined.

✉ Itolchinsky@ub.edu



**Development of syntactic packaging in French across modalities and text types**

Florence Chenu, Harriet Jisa, &amp; Audrey Mazur

Université de Lyon &amp; CNRS, France

Producing monologues requires rapid processing of linguistic resources to access lexical items, to monitor referential continuity, and to ensure overall text coherence. In addition, individual propositions must be elaborated into clause packages (Aparici, 2010 ; Berman & Nir-Sagiv, 2004 & 2009 ; Nir-Sagiv, 2008 ; Nir-Sagiv, 2010 ; Nir-Sagiv & Berman, 2010). Our developmental analysis examines the clause-combining strategies employed by 160 French-speaking monolingual children, adolescents, and adults from two socio-economic strata in producing two types of text – narrative and expository – and in two modalities – spoken and written. Spoken and written language production operate under radically different time constraints. The spoken modality forces speakers to plan and produce rapidly, while the written modality provides writers with more planning time. Our results indicate that this difference in time constraints is reflected in the clause-combining strategies observed in the texts, with written texts showing more non-finite subordination and a wider variety of relative clauses than the spoken texts. Our study addresses the forms and the functions of these two structures across text types and modality. We also observe developmental differences, with the younger children showing less differentiation in syntactic structures in the two modalities than the older groups, as well as SES differences. Our methodology allows for the comparison of each participant's spoken and written texts, as well as comparisons between differing orders of production: half of the participants produced the texts in the spoken-then-written order, while the other half produced in the written-then-spoken order. In previous studies on other text characteristics, we suggested that writing first resulted in better spoken texts (Chenu, Fayol, Jisa, Maggio et Lété, 2010; Mazur-Palandre, Jisa, Chenu & Fayol, 2010). In this current study, speaking first or writing first makes little difference on syntactic packaging but speaking first has an effect on T-Unit length.

✉ [Florence.Chenu@univ-lyon2.fr](mailto:Florence.Chenu@univ-lyon2.fr)

## **The development of syntactic structures in writing: Old data re-analysed through recent theoretical approaches**

José António Brandão Carvalho

Institute of Education, University of Minho, Portugal

In a study developed more than 20 years ago (Carvalho, 1989), we related the development of syntactic structures in writing and cognitive development as described in Piaget's theories. Based on the analysis of 140 narrative and expository texts written by 70 students (ages 7 to 14/grades 2 to 9), we found a qualitative evolution in writing as children moved forward from concrete to abstract thinking. The main characteristic of that syntactic evolution was a progressive complexity that showed a growing capacity to relate two or more different topics in the same syntactic structure.

John Hayes (2011) has recently presented a study that aims at modelling early writing development. Based on Bereiter and Sacrdamalia's knowledge-telling model, he describes three different strategies employed by young children in text production (the flexible-focus strategy; the fixed-topic strategy; the topic-elaboration strategy). According to Hayes, "these strategies produce texts that have distinct and identifiable features and show distinct developmental trajectories."(p. 382).

Our intention in this paper is to re-analyse the data of our 1990 study. This analysis is focussed on syntactic complexity and aims at identifying the predominant syntactic patterns and detecting at what levels (sentence, clause or phrase) syntactic connections are made, as well as the nature of the syntactic connectors used.

Afterwards, we want to establish possible correspondences between these patterns and the diverse strategies described by Hayes. We also want to see how far the different strategies he describes correspond to different development stages and to find out to what extent different patterns apply to different textual types (narrative and expository).

✉ [jabrandao@ie.uminho.pt](mailto:jabrandao@ie.uminho.pt)

## **The role of text production processes in the development of understanding during writing**

Veerle Baaijen<sup>1</sup> & David Galbraith<sup>2</sup>

<sup>1</sup>Center for Language and Cognition Groningen, University of Groningen, the Netherlands

<sup>2</sup>Southampton Education School, University of Southampton, UK

Although writing is commonly described as a process of discovery, there are contrasting conceptions of the source of its epistemic effects. This paper focuses on the fundamentally different role that two writing theories – the knowledge-transforming model (Bereiter & Scardamalia, 1987) and the dual-process model (Galbraith, 2009) - attribute to text production processes. The knowledge-transforming model attributes development of understanding to deliberate strategic planning, whereas the dual-process model claims that it depends on spontaneous text production processes.

42 low and 42 high self-monitors were asked to write an article for the university newspaper in one of two planning conditions: outline planning or synthetic planning for 5 minutes before spending 30 minutes writing the text. To assess development of understanding, participants were asked to rate their understanding of the topic both before and after writing. To assess the processes involved, Inputlog was used to collect keystroke logs during writing (Leijten & Van Waes, 2006). A set of sixteen measures derived from the key-stroke logs were subjected to principal components analysis to create 5 independent measures of writing process: (i) planned sentence production; (ii) within sentence revision; (iii) revision of global text structure; (iv) post-draft revision; and (v) careful word choice. A series of 3-way between subjects ANOVAs were carried out on each of these measures.

Overall, writers reported significantly more development of understanding after synthetic than after outline planned writing. Process analysis showed: (i) that increases in understanding were associated with less planned sentence production for high self-monitors but not for low self-monitors (an interaction between self-monitoring and knowledge change, ( $F(2,67) = 5.29, p = .007$ )). (ii) Low self-monitors writing synthetically planned texts engaged in higher levels of within sentence revision than high self-monitors writing synthetically planned texts ( $F(1,67) = 3.63, p = .06$ )). Increases in understanding were associated with higher levels of within sentence revision ( $F(2,67)=3.60, p=.03$ ), and this was more pronounced for the high self-monitors than the low self-monitors ( $F(2,67) = 3.05, p = .05$ )). (iii) There was no association between the other measures and developments in understanding.

We will argue that these results favour a text production account of the development of understanding through writing.

✉ V.M.Baaijen@rug.nl

## **Writing argumentative texts: The effects of electronic outlining on students' writing product and process**

Milou de Smet<sup>1</sup>, Saskia Brand-Gruwel<sup>1</sup>, Mariëlle Leijten<sup>2</sup>, & Paul A. Kirschner<sup>1</sup>

<sup>1</sup>Open University of the Netherlands, the Netherlands

<sup>2</sup>Flanders Research Foundation - University of Antwerp, Belgium

Writing is an important and complex skill that can be enhanced by effectively using writing strategies that help monitoring the writing process (e.g. Kellogg, 1988). This study focuses on using electronic outline-tools as a specific support for a planning strategy. Previous research shows positive effects of outline-tools on students' writing performance (de Smet et al., 2011). However, less is known about how these effects are achieved. To understand how electronic outlining influences writing, the three main components of the writing process – planning, translating and reviewing - (Flower & Hayes, 1981) serve as a starting point in our study. Focus is not only on final writing products but also on the orchestration of the writing process. This leads to the following research question: What is the effect of using an electronic outline-tool on students' (a) writing performance, (b) organisation of the writing process and (c) perceived mental effort?

It is hypothesized that a pre-planning strategy such as outlining reduces students' on-line planning and reviewing. Students may use their outline as a guide while elaborating their texts while students without outlines need to consider content, structure and formulations more extensively while writing. This might increase perceived mental effort.

In this study, a combined within- and between-subjects design was used. In total 95 tenth-grade students wrote two argumentative texts with or without an outline-tool. Self-report data on perceived mental effort and the organisation of the writing process was supplemented by detailed process-data collected via the keystroke logging programme Inputlog (Leijten & Van Waes, 2006).

Preliminary analyses show that electronic outlining positively influenced writing performance. Using an outline-tool significantly improved the presentation of the argumentative structure. Process data suggest that outlining increased total writing time, but no outline effect was found on students' planning and reviewing. However, further analyses of the logging data will enable focusing more explicitly on the different stages of the writing process. By dividing the process in ten equal intervals, we will describe the evolving process in consecutive observations. Finally, self-reports show no outline effect on students' perceived mental effort. Nevertheless, mental effort decreased when repeatedly using the same writing strategy.

✉ Milou.desmet@ou.nl

## Writing of tricky words

Guido Nottbusch & Britta Grabherr

University of Potsdam, Germany

In this pilot study we wanted to look more closely at the interplay between cognitive processes involved in handwriting and the (biomechanical) handwriting procedure itself. We observed the occurrence of pauses in the course of writing of adults while producing orthographically tricky words. Pen velocity was recorded by means of a digitizing tablet and subsequently analysed.

According to the hierarchy identified in van Galen's (1991) model of handwriting, delays caused by higher cognitive processes (such as access to the spelling of words) should arise before the production of the actual character. However, children in fifth grade showed delays in handwriting right at the tricky spot (Nottbusch, 2008). It may be that this is a specific feature of developmentally unskilled spelling. To explore this possibility we dictated 30 orthographically tricky words to skilled writers. By tricky words we mean low frequency words showing an opaque phoneme-grapheme-correspondance (pgc). So the spellings must have been retrieved from the lexicon, if possible, or by pgc. Our assumption was that writing on the basis of pgc might have led to slowing-down or even pausing of the writing flow. All the stimuli consisted of nouns containing a tricky spot appearing earliest at the fourth letter to make sure that the possible delays occurred during writing and did not just add up to the initial latency. After completing each word participants judged the correctness of their spelling and made corrections if necessary. Finally, they were asked to copy the 30 words from the screen as a baseline measurement. All data were recorded using a digitizing tablet (WACOM Intuos 4) and Eye & Pen software.

We present our results and integrate these into a model of handwriting, considering aspects of spelling acquisition. We will conclude by identifying potential consequences for the diagnosis of spelling disabilities in children.

✉ [gnott@uni-potsdam.de](mailto:gnott@uni-potsdam.de)

**Symposium**  
**Multiple Levels And Temporal Dimensions Of Cognitive ↔ Linguistic Translation  
Processes Across Development**

Michel Fayol<sup>1</sup> & Virginia Berninger<sup>2</sup>

<sup>1</sup>University Blaise Pascal, Clermont-Ferrand-CNRS, France

<sup>2</sup>University of Washington, US

This symposium draws on cross-country collaborations of writing researchers in Europe and North America resulting in three edited volumes published in 2011 or expected in 2012, which cover where we have been, where we are, and where writing researchers may collectively journey in the future. The presentations, like the collaborations, focus on the cognitive processes and bidirectional cognitive ↔ linguistic translation processes in writing that occur at multiple levels in linear and nonlinear time in normally developing children and adults as well as those with selective language impairment, dysgraphia, and dyslexia.

Vincent Connelly will (a) comment briefly on each of the four presentations, (b) discuss his and colleagues' programmatic research on writing in children with and without language and motor problems (Connelly, Dockrell, Barnett, 2011), and (c) engage the audience and presenters/co-authors in dialogue about issues raised in the symposium.

**Discussant**

Vincent Connelly

Oxford Brookes University, UK

**Contribution of silent orthography to the cognitive ↔ linguistic translation process**

Virginia Berninger<sup>1</sup>, Michel Fayol<sup>2</sup>, John Hayes<sup>3</sup>, Gert Rijlaarsdam<sup>4</sup>, & Rui A. Alves<sup>5</sup>

<sup>1</sup>University of Washington, US

<sup>2</sup>University Blaise Pascal, Clermont-Ferrand & CNRS, France

<sup>3</sup>Carnegie Mellon University, US

<sup>4</sup>University of Amsterdam, the Netherlands

<sup>5</sup>University of Porto, Portugal

Developmentally, five mechanisms in verbal working memory support learning to spell (and read): pattern analyzer, oracle, cross-code talker, cross-code writer, and silent scribe (Berninger, Fayol, & Alamargot, 2012). New longitudinal data, based on slopes in growth curves, show that grade 4 writing outcomes are uniquely and positively predicted by (a) growth in finger sequencing (handwriting and composing); (b) growth in orthographic coding (printing letters) and rapid automatic switching grade 4 only (cursive script); and (c) growth in orthographic coding (dictated real and pseudoword spelling) and orthographic and morphological coding (recognizing correct real word spellings) when phonological, orthographic, and morphological word coding entered as simultaneous predictors. In a longitudinal case study from grades 1 to 5 of 12 good writers and 8 with dysgraphia (Hayes & Berninger, 2012), silent orthography was the one consistent impairment. Silent word-specific orthography activated the cognitive portal of mind (in frontal brain region) (Richards, Berninger, & Fayol, 2009). A brief overview will be given of on-line writing studies in progress examining, before and after instruction, the nature of cognitions accessed during translation via the silent scribe during self-regulated working memory cycles, supported by access to one or more of four functional language systems, organized by levels of language, and informed by visions of new approaches to writing research (Rijlaarsdam & van den Bergh, 2011; Alves, Branco, Castro, and Olive, 2011).

✉ [vwb@uw.edu](mailto:vwb@uw.edu)

### **Does early spelling impact later composing? A longitudinal study**

Bernard Slusarczyk<sup>1</sup>, Pascal Bressoux<sup>2</sup>, & Michel Fayol<sup>1</sup>

<sup>1</sup>University Blaise Pascal, Clermont-Ferrand, France

<sup>2</sup>Pierre Mendes-France University, France

This presentation reports the results of a study exploring the possible negative impact of spelling difficulties in the early grades on composing in the later grades—both the quantity and quality of text produced. This question is important in French because the French orthographic system is not always consistent and marks morphology features without phonological counterparts. One hypothesis is that poor spellers will be poorer in composing than good spellers. We tested this hypothesis in a longitudinal study of spelling and composing of about 70 children, who were tested twice, in both 3rd and 6th grade. Correlations were computed within grade level (e.g., 3rd) and between grades (3rd and 6th grade). The results showed that poor 3rd grade spellers, regardless of the kind of spelling errors committed, produced texts of poorer quality and quantity in 6th grade. In this presentation we will explore explanations for this longitudinal relationship between spelling and composing. Of note, a similar relationship between spelling and composing was found in another longitudinal study of English speaking children (grades 1 to 5 and grades 3 to 7), which included a range of spelling ability (Abbott, Berninger, & Fayol, 2010). English, like French, is not always regular in spelling and marks morphology that does not always correspond to the sounds that go with letters in alphabetic principle (e.g., Nunes & Bryant, 2008, 2009). So the results may apply to more than one language, even to some extent to transparent orthographies like Italian (Arfé, Bernardi, Pasini, & Poeta, 2011).

✉ [bernard.slusarczyk@ac-clermont.fr](mailto:bernard.slusarczyk@ac-clermont.fr)



**The relationship between sentence generation, writing, and language  
in Italian and English developing writers**

Barbara Arfé<sup>1</sup>, Julie Dockrell<sup>2</sup>, Vincent Connelly<sup>3</sup>, Kirsty Walter<sup>3</sup>, & Bianca De Bernardi<sup>4</sup>

<sup>1</sup>University of Padova, UK

<sup>2</sup>Institute of Education, UK

<sup>3</sup>Oxford Brookes University, UK

<sup>4</sup>University of Verona, Italy

Text generation involves the ability to translate thoughts into ideas and ultimately sentences. Thus an important prerequisite for the developing writer is the ability to have flexible access to lexical and grammatical representations to translate them into written text. Yet the ability to use grammatical knowledge and generate sentences in writing remains relatively unexplored (but see Berninger, Nagy, & Beers, 2011; Dockrell et al., 2007; McCutchen et al., 1994). We present 2 studies examining these issues in translation. Study 1 investigates the contribution of spelling, expressive vocabulary, and grammatical skills (grammatical knowledge and sentence generation) to the writing performance of beginning writers learning a shallow orthography (Italian). Eighty-three 2nd (N=46) and 3rd graders (N=37) children performed picture naming and picture rapid naming, receptive grammar, and spelling standardized tasks and were asked to compose a short personal narrative on a topic title. Children's capacity to retrieve and use their grammatical knowledge in writing was assessed by a Sentence Generation task and a Sentence Re-formulation task developed for this study. Grammatical knowledge and fluency in generating sentences explained individual differences in writing beyond spelling skills. To further examine the relationship between sentence generation and writing, Study 2 presented the same sentence generation task in an oral and written form to 99 English-speaking children learning a non-transparent orthography. Ten-year-old children with Specific language impairment (SLI) were matched to chronological (CA) and language matched (LA) peers. Performance for both the written and oral task was similar for the children with SLI and their language matched peers; and both groups performed significantly worse than the chronological age matched group. For children with SLI and their language matches, performance on the oral version was significantly better than performance in the written version. This pattern was reversed for the CA group. Both spelling and written sentence generation explained individual differences in an assessment of narrative writing. Both studies are considered in terms of the differential impact of sentence generation on text production in developing writers.

✉ barbara.arfe@unipd.it

**Nature and time course of subject-verb agreement during written sentence production: Developmental perspective**

Denis Alamargot<sup>1</sup>, Carmen Paduraru<sup>1</sup>, Lisa Flouret<sup>1</sup>, Virginie Pontart<sup>1</sup>, & Michel Fayol<sup>2</sup>

<sup>1</sup>University of Poitiers & CNRS, France

<sup>2</sup>University Blaise Pascal, Clermont-Ferrand & CNRS, France

We present a series of experiments investigating in adults (experts) and children (grades 5, 8, 11) the nature and the dynamics of subject-verb agreement processing during the written production or completion of French sentences. Several types of sentences, varying in their syntactic structure and/or in the phonological and semantic characteristics of the verb, were studied and writers' performance was recorded by "Eye and Pen" software (Alamargot, Chesnet, Dansac, & Chesnet, 2006), which provides information about the rate of handwriting production and gaze during word production. Each experiment examined the manner in which a more or less experienced writer controls the agreement procedure. Results are coherent from one experiment to another. They show that writers, faced with more or less ambiguous agreements (attraction errors), succeed in agreement by gazing at the previously produced trace (actually in the noun phrase), in order to reactivate the grammatical number while producing the verb. Results (phrases and verb fluency; saccadic activity from the verb) show that this mode of control is evolving with age but also depends on the linguistic characteristic of the verb (spelling, semantic, phonology) and the cognitive resources of the writer. In conclusion, we propose a general framework of the verb agreement functioning, based on a serial and dynamic mode of processing and discuss educational implications. The presentation is based on a research programme developed in the CeRCA-CNRS laboratory in France (resp. D. Alamargot, with C. Leuwers, D. Chesnet, V. Pontart, C. Paduraru and M. Fayol), in collaboration with HEC-Montreal – Canada (G. Caporossi, D. Larocque) and funded partly by ELDEL FP7 (ITN Marie-Curie). The "Eye and pen" device (Alamargot, et al., 2006) provides comparable results obtained in different contexts.

✉ Denis.Alamargot@univ-poitiers.fr

**At school, personal writing also matters – experiences and evidence**Inês Cardoso<sup>1</sup>, Luísa Álvares Pereira<sup>2</sup>, & Rosa Maria Oliveira<sup>3</sup><sup>1</sup>Escola Básica 2,3 Gafanha da Nazaré & Universidade de Aveiro, Portugal<sup>2</sup>Universidade de Aveiro, Portugal<sup>3</sup>Escola Básica 2,3 António Dias Simões, Portugal

Many students resist school and hate writing. How to guide them to be interested in learning in class? From the perspective of the people that they are, what is the purpose of in-school writing? These are some of the questions that many teachers ask, but to which answers are hard to find.

This work is based on the assumption that underlying the learning and teaching process of writing, on a multifunctional and processual perspective, must be the knowledge about the relationship students (subjects) establish with writing, both in school and extra-school contexts (Barré-De Miniac, 2008; Pereira, 2004).

Thus, we have prepared and implemented a questionnaire to 226 students from 6<sup>th</sup> and 8<sup>th</sup> grades of Aveiro which allowed us to ask the meanings attributed to writing, as well as the free writing practices and in-school writing. We found significant differences in the representations associated with these two writing contexts, which have been contributing for us to reflect on how this information can be useful to the teaching of writing.

We intend, in this paper, to present the results of this questionnaire, which, although not generalized, are consistent with international studies (Lenhart, Arafeh, Smith, & Macgill, 2008; Penloup, 1999): young people write within extra-school context, without the imposition of parents or teachers, and their writing is abundant and diversified, and not limited to electronic writing (Cardoso, 2009). The questionnaire also allowed us to know the frequency of writing, who writes more, depending on gender, grade and school performance. We have also drawn up a portrait of the practice of writing at school, which showed us an undeniable and strong presence of the non-compositive writing.

The knowledge of this reality has been particularly relevant in the design of some research/teaching experiences seeking to help develop in students an *epistemic relation with knowing how to write*, based in an out-of-school existence of a *personal relation with writing* (Cardoso & Pereira, 2011; Cardoso & Pereira, 2008; Graham & Harris, 2009; Oliveira, 2011; Pereira, Cardoso, & Graça, 2009). At this stage of our investigation, we will therefore reflect on the factors that determine success in the mentioned experiences, which are already pointing towards the conciliation of self-identity and epistemic perspectives in writing development, taking into account either the singularity of the subject's relationship with knowledge/writing or the cognitive, personal and social dimensions of the written language.

✉ inescardoso@ua.pt

**Adolescent authorial identity in a student-initiated writing group:  
Examining intersections between school-based and voluntary writing**

Jill V. Jeffery<sup>1</sup> & Jody N. Polleck<sup>2</sup>

<sup>1</sup>University of New Mexico, US

<sup>2</sup>City University of New York, Hunter College, US

This project investigated students' participation in a self-initiated writing group in a New York City public high school. Previous research has investigated relationships between students' in- and out-of-school writing practices. Yet we know little regarding the extent to which students engaged in voluntary, process-oriented writing practices view their work as connected to the writing they do for school. Our research is framed by a sociocultural understanding of writing that draws on the concepts of field and habitus. We examined the extent to which an understanding of writing developed through participation in a particular field translates to habitus in other fields. The questions addressed were: How do students participating in a voluntary writing group view themselves as writers? To what extent, if at all, does students' voluntary writing of narrative genres influence their assigned writing of academic genres, and vice versa?

We examined four students' participation in a writing group that met weekly at Creative Works High School (a pseudonym), which serves approximately 400 students of whom 92% are Latino and Black. During the lunchtime meetings, participants presented drafts of their extended fictional narratives and received feedback from group members and from the researchers. We audio-recorded discussions and collected samples of students' narrative writing at four writing group meetings in 2011. When time permitted during the sessions, we questioned participants regarding how they viewed themselves as writers, their sources of inspiration, criteria they used to evaluate their work, and audiences they envisioned for their writing. In 2012, we collected academic writing samples and conducted follow-up interviews with each student.

Students' articulated understandings regarding writing in different fields were compared to the writing they produced using complimentary methods of analysis. To examine the extent to which students perceived their writing practices across fields as mutually influential, we analyzed interview transcripts using sustained inductive coding procedures. Next, we used a systemic functional linguistics framework to analyze language features in the writing samples, and compared these results to interview analyses. Results suggest that 1) students' school writing experiences were dominated by the state's high-stakes assessment requirements; 2) students constructed non-agentive authorial identities with respect to their in-school writing, but strongly agentive identities with respect to their out-of-school writing; and 3) while students initially did not see connections between their in- and out-of-school writing practices, they tended to discuss commonalities as interviews progressed.

✉ jjeffery@unm.edu

## **Two students' writer identities**

Nikolaj Frydensbjerg Elf

University of Southern Denmark, Denmark

The paper will present findings from a Danish pilot project conducted 2009-2010 as part of a longitudinal study of students' writing in the disciplines from grade 9 through grade 12 (cf. [www.sdu.dk/wllw](http://www.sdu.dk/wllw)). The empirical focus of the pilot project is grade 9.

The longitudinal study brings together two theoretical perspectives. One is socio-cultural writing theory (Vygotsky, 1986; Wertsch, 1998), the other is the 'discursive turn' in disciplinary didactics (Ongstad, 2006). Methodologically the study is inspired by New Literacy Studies (Street, Pahl, & Rowsell, 2010) in its ethnographic approach and in the understanding of literacies as social practices.

The data sources of the pilot project are participant observations, assignments, student writing, semi-structured teacher and student interviews, and a student questionnaire.

The presentation will foreground two students' writing in Science, viewed in the context of a specific school. It will be guided by the following research question: What are the characteristics of the writer identities of the two participating students?

The analysis applies concepts and analytical tools developed by Roz Ivani and Paul Prior. Ivani (1998) has contributed with tools for studying writers' formation of identities arguing that 'socially available possibilities for selfhood' are inscribed in the contexts of writing through three dimensions, 'autobiographical self', 'discoursal self', and 'self as author'. Prior (2004) has further developed the understanding of writing by suggesting 'participation structures' as a tool for understanding the ways writers position themselves and are being positioned in writing processes.

An important finding is that to some extent the two students form similar identities, but that they still differ in interesting ways. Similarities are found in the way they actualize discoursal selves, appropriating the dominating writing practices of the Science subject. Differences are found in their selections of form and style in texts, and in the ways they position themselves in participation structures.

The comparative analysis of two students supports the claim that the development of writing competence goes hand in hand with the formation of writer identity, and that we need to further explore the variances of writer identities in relation to learning in the subjects and to developing writing.

✉ [nfe@ifpr.sdu.dk](mailto:nfe@ifpr.sdu.dk)

## **Authorial identity and agency in adolescent English language learners' stances toward content-area writing**

Kristen Campbell Wilcox<sup>1</sup> & Jill V. Jeffery<sup>2</sup>

<sup>1</sup>University at Albany, US

<sup>2</sup>University of New Mexico, US

This paper examines English language learners' (ELLs) stances toward content-area writing through a discourse analysis of interviews with 27 students in secondary schools across five states. Through a micro-level analysis of students' stance utterances regarding writing, the authors show how adolescent ELLs construct authorial identities when working to meet writing demands in their math, science, social studies, and English language arts classes.

The sociocognitive perspective that we employ here emphasizes the intersubjective nature of stancetaking, wherein individuals position themselves vis-à-vis previous stance utterances, and in the process construct authorial identities. In this framework, agency and stance are connected through acts of positioning, in which speakers situate themselves in relationship to objects (e.g., writing tasks), as well as other speaking subjects (e.g., teachers) (DuBois, 2007). "Authorship," as we define it in this study, is the activity of self engaging in dialogue with other and can be characterized by particular stances toward the collective experience of transforming knowledge in writing (Bakhtin, 1986).

In light of the construct of stance as it relates to identity formation, the study investigates two questions: (1) What does the analysis of stance reveal about the development of adolescent ELL writer identity in school-sponsored content-area contexts? (2) How does the analysis of stance inform understandings of ELLs' agency to improve their content-area writing? Our goal in addressing these questions is twofold. First, we seek to operationalize a discourse analytic procedure that can advance theories of multilingual writing development in discipline-specific contexts. Second, we aim to expand the knowledge base on multilingual adolescent identity formation to inform writing pedagogies.

Transcripts were analyzed by micro-level coding of stance utterances- identifying subjects, objects and epistemic or affective stances within individual student transcripts. A matrix was then used to identify patterns across all interviews with regard to stances regarding self as writer and stances toward writing across school subjects. Findings suggest that the ELLs in this study expressed positive stances toward writing as well as toward themselves as writers in general. However, these positive stances toward writing were often accompanied by negative expressions toward their perceived writing abilities and particular kinds of writing they experienced in their English language arts classes. Overall, participants in the study showed evidence of engaged, agentic, and resilient authorial identities.

✉ Kwilcox1@uamail.albany.edu

## **How can we measure audience design in written instructions? Expert ratings, expert surface markings, and basic text properties**

Markus Schmitt

University of Education, Heidelberg, Germany

While performing an instructional writing task, an author may consider her or his addressee very explicitly and directly, perhaps more than in writing tasks from other genres. With respect to the writing process, measuring audience awareness can be realized by, e.g., think-aloud-procedures (see Janssen, van Waes & van den Bergh, 1996). Analyses of the resulting text products, however, should also reveal traces of audience design, e.g., language indicators of leading the reader through the text as a whole. Common methods here include global and specific expert ratings as well as sophisticated linguistic text analyses.

The study presented here addresses another perspective on measuring audience design using expert data. N=133 university students participated as expert raters of 78 instructional texts. The applied texts were written by n=26 university students in a prior study. Every expert received a booklet containing 39 different texts. Experts were then asked to rate the textual quality of audience design on different levels of specificity. Additionally, they had to mark all elements on a textual surface, which they thought to be indicative of audience design. Further information about the text properties was available (text length, writing duration, overall number of revisions).

All rating variables and surface marking variables were normally distributed. Text length showed a significant correlation with the number of surface markings ( $r = -.50^{**}$ ) as well as with the global rating dimension ( $r = -.59^{**}$ ). In further analyses, text length thus was statistically considered. Expert ratings and expert surface markings did not intercorrelate with each other. Writing duration did not show any correlations with the rating variables or the marking variables. The number of revisions for each text (which were not known to the raters), however, showed significant correlations with rating variables ( $r = .41^*$ ;  $r = .35^*$ ), but not with marking variables (n.s.).

Measuring audience design using expert data may benefit from different assessments. Both methods presented here can clearly provide different information, as the lack of intercorrelation indicates. However, further research should clarify the value of expert ratings and expert surface markings for the measure of audience design considering information of the writing process as well as product-based linguistic text analyses.

✉ markus.schmitt@ph-heidelberg.de

**“The text is written in a very childish manner and a lot of paragraphs are positioned wrongly.” The receipt and implementation of feedback from authentic readers and from peers**

J. F. van Kruiningen & Tineke Jansen

University of Groningen, the Netherlands

The notion of *audience awareness*, as part of writing expertise, is a notion which has recently received more attention in writing education and writing research (Reiff, 2002; Rijlaarsdam et al. 2009; Sato & Matsushima, 2006). The writers' representation of a reader may not always correspond with the actual characteristics of the intended audience. As part of a writing task, the audience can be invited to actively participate in the writing process. This way, writers can make better use of the 'co-constructive role' of readers and focus on the specifics of audience (Reiff, p. 102).

In academic writing courses, teachers and peers can provide feedback as active readers, especially when genres are at hand which are situated within the academic community. With respect to writing tasks where a non-academic audience is at order, feedback from authentic readers can attribute to greater audience awareness.

In this research project, we examined the differences between feedback from an authentic audience (grade 7 students) and peers (freshmen in an academic writing class). We focused on one specific writing task: a short popular scientific article for the children's page of a Dutch newspaper (with grade 7 students as target group). Based on (an adjustment of) the model of Nelson & Shunn (2009), we analysed the feedback of both groups and we took a closer look at the students' experiences with both forms of feedback.

The results from this study show that the two types of feedback differ in several respects. The peers more often give solutions, they more often localize their feedback and their feedback is much more mitigated, where the feedback from the authentic audience is more straightforward. The writers more often understand and implement the feedback from their peers than from the authentic audience. The extent to which the feedback is understood and implemented is influenced by the scope and the localization of the feedback. In a follow up study we are now examining how these outcomes relate to the quality of the texts. At the SIG Writing Conference, we will report on the outcomes of both research projects.

✉ [j.f.van.kruiningen@rug.nl](mailto:j.f.van.kruiningen@rug.nl)



**'Who is going to read the story that I have written?' A study on the role of the interlocutor in textual revision**

Alina Galvão Spinillo

Universidade Federal de Pernambuco, Brazil

Revision is a component of the writing process, which depends on linguistic and cognitive abilities, on the context on which it takes place (i.e. tools used, individually or in collaboration) and on whether the writer has an interlocutor in mind. This study examined the role of the interlocutor in textual revision as the recipient of texts, which have been revised by children. Forty middle class Brazilian children (8-9 years old) were asked to reproduce in writing a story, which was read to them. After the written reproduction they were asked to revise their text in order to improve it. Half of the children (Group 1) were told that the text to be revised would be read by a student from another school who did not know that story. The other half (Group 2) were told that the text to be revised would be read by a teacher from another school who did not know that story and who wanted to assess students' writing skills. After the textual revision participants had to justify each one of the changes they made in their texts. The data were analyzed according to: (i) the operations used (i.e. addition, deletion, substitution, reordering); (ii) the linguistic units changed (i.e. word, sentence); (iii) the nature of the change (i.e. orthographic, syntactic, semantic, graphic); and (iv) the reasons why the changes were made. The main findings were that in Group 1, most of the changes were related to meaning (i.e. substitution and/or addition of words and sentences), whereas in Group 2 most of the changes were related to form (i.e. orthography and syntax). In addition it was shown that the explanations provided by the children in Group 1 aimed at making their texts clearer and closer to the original story, while those made by the children in Group 2 aimed at making the words in their texts correctly written. Thus it was concluded that the interlocutor to whom the text is addressed plays an important role in the process of textual revision.

✉ [alinaspinillo@hotmail.com](mailto:alinaspinillo@hotmail.com)

**The impact of revision and feedback in the quality of children's written compositions**

Ana Cristina Silva

ISPA – Higher Institute of Applied Psychology, Portugal

Revision is a very important process to promote evolution in children narrative texts, but at the end of primary school students are not self-regulated writers. This is an experimental study in which 45 children from 4<sup>th</sup> grade were given a pre-test and a post-test intended to evaluate the quality of their compositions. We asked children to write down a composition at pre and post-test based on the same sequence of images. The compositions were evaluated at taking in account the proportions of orthographic errors, and there was given a classification by two independent observers in what concerns to cohesion and coherence according to a classification grille. In between the two tests, 2 experimental groups of 15 children underwent a training program designed to improve the quality of their texts based on revision processes, where they wrote down 15 compositions. Experimental Group 1 had to revise their compositions according to the guidelines of 3 different grilles (one for misspellings, another for punctuation and cohesion and another for coherence) Experimental Group 2 had the same intervention program but had also a feedback on their initial composition's version for each composition. The feedback give children information about the nature of errors they committed namely at orthographic level, cohesion and coherence. The Control Group, also with 15 children wrote down the same number of written compositions, but were not engaged in revision's processes. Children from Experimental Group 1 and 2 improved the quality of their spelling and the cohesion of their texts when compared to Control Group. Only children from Experimental Group 2 evolved on the coherence of their texts. There were no differences between the performance of Experimental Group 1 and Control Group at this level.

✉ csilva@ispa.pt

**Improving L2 writing quality: A series of two intervention studies**Phuong-Nam T. Nguyen<sup>1</sup>, Gert Rijlaarsdam<sup>1</sup>, & Wilfried Admiraal<sup>2</sup><sup>1</sup>University of Amsterdam, the Netherlands<sup>2</sup>Leiden University, the Netherlands

Vietnamese EFL higher education faces challenges as a result of conflicting cultures reflected in different writing genres and pedagogies. For instance in L1 (Vietnamese) writing, the genre of argumentative writing does not even exist. L1 learners write on a literature theme to prove their understanding and development of moral and community values. Writers' own voice is not asked for. Content for L1 essay writing is prepared in pre-writing classroom activities as an agreement between teachers and learners. This implies that activities like free writing advocated in ESL-methodology do not fit the learners: they experience free writing as unproductive.

We set up two intervention experiments (pretest-posttest control design with switching replications) with 66 EFL intermediate students.

The first intervention, model analysis, was based on text pattern knowledge and its efficacy in probing ideas and structuring text organization (Reynolds & Perin, 2009). We observed a positive effect on the perceived value of idea generation in free-writing: after the intervention, students used more of the generated ideas in their final text.

The second experiment was to test the efficacy of collaborative writing and free-writing in students' enriching arguments and voice. An effect of collaborative writing was observed on various aspects of argumentation; however, this effect was at the cost of the quality of voice. In free writing, students displayed a tendency to increase their own voice, however with a lower quality of argumentation, less counterarguments, multi-faceted arguments, and lower text organization cohesion compared to the small-group discussion condition.

✉ N.T.PhuongNam@uva.nl

## Development of fluency in L2 writing

Åsa Palviainen & Sinikka Lahtinen

Department of Languages, University of Jyväskylä, Finland

Although fluency in written texts (i.e. what makes a text fluent to read) has been of interest for a long period of time, fluency in the writing process has only recently been focused on. This is partly due to the fact that only until recently, it has been possible to examine the writing process in more detail thanks to keystroke-logging techniques, but also probably due to that written products, the end-state, have been regarded more important. From previous research it is clear that different individual processes may lead to a similar end-result, and vice versa, that similar processes may lead to different results. Fluency in the writing process may lead to less cognitive burden (cf. working memory), which may affect the quality of the text. However, although there is research evidence showing that there is a correlation between fluency and L1/L2 proficiency, there is not necessarily a correlation between fluency and text quality.

This study focuses on L2 writing development, with a special focus on writing fluency, in a group of university students. Twenty-one Finnish-speaking students studying Swedish as L2 participated in the study. The data was collected using the keystroke-logging software Scriptlog. The students were asked to write an argumentative text based on their personal opinions, in Swedish. The procedure was repeated the second year, but in addition to writing in Swedish, they carried out a very similar task in their L1, Finnish. The texts were rated using the CEFR (Common European Framework of Reference) six-point scale, ranging from A1 to C2. Different types of measures of fluency – including traditional measures such as T-unit length and tokens per minute, and process measures such as fluency, burst and fluency during burst (Lindgren et al. 2008) – were applied. The preliminary results show that although not all the traditional fluency measures differed from year one to year two, the fluency measures based on the processes definitely did. The results suggest that the proficiency in and automaticity of their L2-writing, improved in the students between year 1 and year 2.

✉ [asa.palviainen@jyu.fi](mailto:asa.palviainen@jyu.fi)

## Written proficiency in L2 and L1

Carolina Gonçalves & Otilia Sousa

Instituto Politécnico de Lisboa, Escola de Educação, Portugal

Assessment (PISA) suggest that countries vary significantly in the extent to which socioeconomic disparities influence educational achievement and also in the extent to which first and second generation immigrants succeed in school (OECD, 2010a; 2010b). This study is part of an investigation with a wider scope, in which the reading comprehension and writing proficiency of subjects of two different groups, attending the 9th grade in public schools, are compared. Students from immigration background (Portuguese former colonies) compose the group in analysis, while Portuguese students without any experience of migration compose the control group. Both groups attend public schools from poor neighborhood at outskirts of Lisbon.

The main goal of this paper is to analyze the writing proficiency of both groups: on textual and notational features, that is, written text as discourse genre, and writing as a notational system.

One important aspect for understanding second language (L2) writing is knowing how it differs from first language (L1) writing. Literature indicates a number of differences between L2 and L1 written texts. In general texts of L2 subjects tend to be shorter and less developed and they are less cohesive. Vocabulary is smaller and L2 subjects also make more errors overall.

This paper outlines the similarities (in notational, linguistic and textual features) between the texts produced by language-minority students, that signal Portuguese as a source of learning difficulties, with monolingual Portuguese speaking students.

✉ carolinag@eselx.ipl.pt

## Fluency revisited

Luuk van Waes<sup>1</sup> & Mariëlle Leijten<sup>2</sup>

<sup>1</sup>University of Antwerp, Belgium

<sup>2</sup>Flanders Research Foundation - University of Antwerp, Belgium

Fluency in writing has been studied from different perspectives and in different contexts (see Latif 2009 for a review). In this paper we compare different measures that have been used in previous research studies to measure writing fluency (e.g. composing rate, i.e. the number of - correctly spelled - words or characters written per minute; length of pause and revisions bursts; mean pause length at different text levels), and suggest some new measures as indicators for fluency (e.g. ratio of active writing time vs. pausing time; time based moving average composing ratio; pause interval ratio; flexible pause thresholds).

To illustrate our approach we conducted two experiments. In Experiment 1 we asked 32 students to produce an argumentative text. Every student wrote one text in Dutch (L1) and one in English (L2) on two different topics following a Latin-square design. In Experiment 2 a comparable experiment was conducted involving 80 students, but in this case the students wrote two descriptive texts. The writing sessions were all recorded with the keystroke logging program Inputlog 5 ([www.inputlog.net](http://www.inputlog.net)) enabling fine-grained post analyses to calculate the different fluency indicators.

Contrastive analyses using the different approaches to fluency described above show significant differences in fluency between resp. the text production in L1 and L2 (within subjects) and the two writing task types (between subjects), but not on all indicators. Moreover, for instance, the pause burst length in L1 is larger than in L2, but depending on the pause threshold the effect size changes considerably. During the presentation we will not only discuss the basic results and their implications, but we will also present a first concept of a fluency classification model based on a factorial analysis of the fluency variables used in this study.

✉ [luuk.vanwaes@ua.ac.be](mailto:luuk.vanwaes@ua.ac.be)

**Factors affecting keystroke latency and fixation location in adults  
composing multi-sentence texts**

Mark Torrance<sup>1</sup> & Gunn Helen O. Oxenburgh<sup>2</sup>

<sup>1</sup>Nottingham Trent University, UK

<sup>2</sup>University of Stavanger, Norway

Output fluency fluctuates during of producing extended text. Broadly speaking, this fluctuation can be interpreted in one of two ways. Writing may slow down (a) because the writer is planning what to say next or (b) because they are monitoring what they have already written. These are not mutually exclusive – monitoring may cue further production. Planning may be conscious and deliberate. Explicit activity of this kind is likely to be associated with extended pauses in output (greater than, perhaps, 2 seconds). However planning, particularly of linguistic features of the text (e.g., word retrieval, production of syntax), may also be rapid, implicit, and unconscious. For typed production fluctuation output rate can easily be measured in terms of keystroke latencies – the time between striking the previous and current key. Whether or not writers are monitoring what they have written can be determined by looking at their eye movements.

We report findings from 24 competent adult writers composing short expository essays. Using a single, multilevel model, we simultaneously estimated effects on keystroke latency of a number of factors including key and digraph frequency, word length and frequency, and character location (mid-word, word-initial, clause-initial, sentence-initial, paragraph-initial). For longer keystroke latencies (pauses) we explored (a) whether pause length predicted amount of text produced before the next pause (sometimes called “burst length”), and (b) where writers looked during these pauses. Consistent with previous studies, our findings suggest that fluency is predicted to some extent by linguistic structure. Keystroke latency is, for example, greater at sentence-initial than at mid-sentence word-initial boundaries. However, our results also suggest that most planning occurs in parallel with output rather than during extended (>2 second) pauses.

✉ mark.torrance@ntu.ac.uk

## Writing development during adolescence: What keystroke logging can reveal

Victoria Johansson & Pia Gustafson

Lund University, Sweden

Few systematic explorations of the linguistic features of children's writing during adolescence exist (cf. Myhill, 2008). Scott (1988) describes the syntactic development from age 9 to 19, and underlines that changes appear gradually during these years, and often consist of the expansion of the clause, e.g., because of more complex noun phrases. Some development can be stepwise, e.g. text length in number of words (Berman & Verhoeven, 2002; Johansson 2009).

This study used keystroke logging to investigate what the processes that take place during text production can reveal about the development of writing during adolescence. We collected 30 expository texts from equally many writers, evenly distributed over the ages 13, 15 and 17. All wrote in their L1, and had no reading and writing difficulties. Thereafter, all pauses (in total 3080) longer than 2 s were coded according to their syntactic location (word, phrase or clause).

Results showed a stepwise development concerning number of words in the final texts. 13-year-olds produced significantly fewer words than 17-year-olds. The 15-year-olds were ranked in between, but not significantly different from any other group. Regarding number of keystrokes in the final texts we found significant developmental steps between all age groups. However, when we compared the number of keystrokes in the linear texts, the 17-year-olds had more than any other age group, but we found no differences between 13- and 15-year-olds. Further investigations of number of deleted characters showed that the 15-year-olds deleted a significant less proportion of the characters compared to the other groups. The coding of the pauses' syntactic location revealed e.g. that 17-year-olds devoted a significantly higher proportion of their pause time to phrase-internal and phrase boundary contexts.

To sum up, the results indicate that the writing development is complicated. The 13-year-olds seem to concern themselves more with deletions on word-level, while the 15-year-olds delete very little, and show a very linear writing behaviour, much corresponding to Bereiter and Scardamalia's knowledge telling-strategy. The 17-year-olds seem to be concerned with editing foremost on phrase-level, which when all is considered may show that they approach their written texts in a qualitatively different way.

✉ victoria.johansson@ling.lu.se



### Reading a finished text versus reading your own emerging text

Roger Johansson<sup>1</sup>, Åsa Wengelin<sup>2</sup>, Victoria Johansson<sup>1</sup>, & Mikael Johansson<sup>1</sup>

<sup>1</sup>Lund University, Sweden

<sup>2</sup>University of Gothenburg, Sweden

Most models of text production (Alamargot & Chanquoy, 2001) include a component of reading, which is usually assumed to overlap with reading for comprehension. However, little empirical data on reading during writing has been published so far. The aim of the current study was to systematically compare reading during writing with reading for comprehension.

Eye movements were recorded for 16 University students in both a text production task and a reading task. In the text production task, the participants wrote an expository text (about typical problems in a school setting) on a computer for about 30 minutes. The reading task was designed to be able to single out effects that could potentially be related to either one's own text or one's own emerging text. Therefore, the participants read three different texts in the reading task: (1) their own finished text; (2) a finished text written by another person on the same topic; and (3) a finished text written by another person on a different topic (in order to also separating out the possibility that the results are topic specific). The three texts were randomized and balanced for order.

Analyses of the reading data in the text-production task and the three texts in the reading task revealed significantly longer fixation durations, shorter saccadic amplitudes and more regressions to previous lines when reading one's own emerging text in the text production task ( $p < 0.01$ ). No significant differences were found between the three texts in the reading task. Therefore, we conclude that the reported effects were all related to the fact that one was reading an emerging text and not because it was one's own text per se.

This study demonstrates that reading during writing involves cognitive processes that are significantly different from those active when reading a finished text. The results are consistent with Hayes' (1996) model of reading to evaluate and are discussed in relation to visual feedback from an emerging text (Olive et al., 2008), executive attention (Engle, 2002), and to current eye tracking research (Holmqvist et al., 2011).

✉ Roger.Johansson@lucs.lu.se

## Issues in key-stroke logging analysis

David Galbraith<sup>1</sup> & Veerle Baaijen<sup>2</sup>

<sup>1</sup>Southampton Education School, University of Southampton, UK

<sup>2</sup>Center for Language and Cognition, University of Groningen, the Netherlands

This paper will describe our experience of analysing key-stroke logs for a set of extended texts, and discuss the issues that arose in doing so. 84 students at the University of Groningen were given half an hour to plan and write an article for the university newspaper. Texts were written using a word-processor and key-stroke logs were collected using Inputlog (Leijten & van Waes, 2006). Samples of “pure” text production were then isolated by excluding sections corresponding to titles, explicit external planning, and end-revision.

The discussion will be organised around four main sets of findings:

(i) The distribution of between-word pause durations was extremely positively skewed. Using mixture models fitted to log-transformed data, we show that the distribution of these pauses reflects three separate distributions, and suggest that these may reflect word retrieval pauses ( $M = 270.43$  ms), phrase boundary planning ( $M = 735.10$ ) and higher level message planning ( $M > 2000$ ).

(ii) Typically, bursts are classified as either P bursts (terminated by a pause  $> 2$  seconds) or R bursts (terminated by a revision). We found that R bursts ( $M = 4.41$  words) were significantly shorter than P bursts ( $M = 5.75$ ), but that there were significant variations in length for different sub-types of these bursts. We suggest, therefore, that bursts need to be classified in terms of how they are initiated as well in terms of how they are terminated.

(iii) Although mean pause duration at sentence boundaries was negatively correlated with P burst length ( $R = -.41, p < .005$ ), it was positively correlated with the percentage of P bursts produced during text production ( $R = .52, p < .005$ ). We suggest that pause duration at sentence boundaries reflects the extent to which bursts are evaluated and revised before they are written down.

(iv) Principal components analysis of these data suggested that they could be grouped into three orthogonal dimensions: (a) *planned sentence production*, (b) *within sentence revision*, and (c) *revision of global structure*.

✉ D.W.Galbraith@soton.ac.uk

### **Symposium**

#### **The Role Of Formative Feedback In Collaborative Writing In Online Learning Environments Or Computer Supported Environments**

Anna Espasa & Teresa Guasch  
Universitat Oberta de Catalunya (UOC), Spain

Writing in collaboration with others is seen as having potential to facilitate and stimulate learning. Furthermore, technology and specifically technology enhanced environments for asynchronous and written communication provide solutions for earlier experienced problems in collaborating as well as promote interactions between peers constructing collaborative texts (i.e. Cerrato & Rodriguez, 2002; Erkens, Jaspers, Prangma, & Kanselaar, 2005; Woo & Reeves, 2007).

In order to contribute to students learning through collaborative writing specific supports are needed. One of these supports is the teacher feedback and peer feedback on student performance, which has been studied in different domains and educational levels (Gielen, Tops, Dochy, Onhema, & Smeets, 2011). There is, however, not much evidence on what characteristics feedback should have in a fully virtual environment to improve student writing (Guasch, Espasa, Alvarez, Kirschner, 2012).

The symposium will address the next two questions: how formative feedback contributes to the writing process in online learning environments and, how students' utilize teacher feedback or peer feedback.

The four papers in this symposium share the conceptualisation of feedback as a dialogic process, where "new understandings are created through joint or participatory activities" (Dysthe et al., 2010, p.244). However, how students utilize this feedback varies depending on the context and learning situations: vocational education (Ortoleva, Schneider & Betrancourt); L2 writing (Strobl), and higher education (Mauri & Onrubia, and Guasch, Espasa, Alvarez & Kirschner). Therefore, the papers selected present different results on what students expect from the sender -the teacher feedback and peer feedback- in the different contexts. The similarities and contradictions in the findings, as well as current research gaps and future research opportunities, will be discussed by the discussant and with the audience.

#### **Discussant**

Gert Rijlaarsdam

University of Amsterdam, the Netherlands

**Individual and collaborative L2 writing using online technologies: The effect of pre-programmed teacher feedback and direct peer feedback on process and product**

Carola Strobl

Faculty of Translation Studies, University College Ghent, Belgium

Recent research on the use of online technologies for academic writing in a foreign language has focused on the impact of online collaboration and peer feedback. The presented study aims to shed light on the difference between collaborative and individual summary writing: how do task-based collaborative vs. individual planning activities and collaborative vs. teacher-induced coordination relate to the quality of the resulting summaries?

The tools used in the experiment are an online learning path for the preparation of the individual writing process, an electronic forum for the preparation of the collaborative writing process, and an online editor (GoogleDocs) for the actual writing process. 48 students of a university course on German language proficiency (L2) wrote two summaries, one individually, and one in collaborative groups of three. The final texts are compared regarding complexity, accuracy and fluency (CAF). In addition, the writing process is observed through revision history tracking and commentary tracking. One of the main research questions is whether the source of feedback (pre-programmed constructivist teacher feedback vs. peer feedback) has an impact on the quality of the outline, the revision process, and the final text.

Our results are not completely in line with the observation made by Kuteeva (2011) and Wigglesworth and Storch (2009) that peer feedback leads to more reader-orientation and therefore to higher accuracy of the collaboratively written summaries. The CAF analysis and the overall quality analysis show little difference between the individual and the collaborative texts. More than on the final product, collaboration seems to have a clear impact on the writing process. The introspection into the peer feedback about language and content in the collaborative groups reveals discussions with multiple turns and a high level of processing depth. However, 75% of the peer feedback relates to surface-level changes. With regard to the students' attitude, 66% prefer individual writing with pre-programmed teacher feedback to collaborative writing with peer feedback. Nevertheless, peer feedback is acknowledged as being helpful (3.7 on a Likert scale of 5).

✉ Carola.Strobl@hogent.be

**Writing and peer feedback to promote professional development  
in vocational education**

Giulia Ortoleva, Daniel Schneider, & Mireille Betrancourt  
Université de Genève, Switzerland

This research explores the potential of individual writing combined with peer feedback to promote experience sharing and professional development of apprentices in initial vocational education.

Vocational education usually combines traditional concept-based school learning with practical workplace training. Although in theory alternating between these two settings is a great opportunity for learning, apprentices encounter difficulties in organizing information gathered in specific contexts into a coherent body of knowledge (Filliettaz, 2010). This research proposes to use writing as a mediating tool to articulate formal explicit knowledge discussed in school with implicit tacit knowledge from the workplace, as proposed in Tynjälä's (2008) integrative framework for professional development. This pilot study investigated whether written peer feedback increased apprentices' topic knowledge and self-efficacy beliefs, by promoting comparison and reflection.

Two classes of a vocational school in the domain of health and social care in Switzerland were split into two conditions: (1) writing with peer-feedback and (2) writing only. After taking a pre-test on a specific nursing act, apprentices in the two groups were asked to write about a critical situation encountered during their internships on a wiki platform. The writing with feedback condition had one additional session in which each apprentice was asked to comment and question, in written form, the text of a colleague. Then they had to go back to their own text, reply to the feedback received and provide a conclusion (how they would react next time). Finally both conditions took a post-test similar to the pre-test.

The results of this study reveal no significant difference between the two conditions regarding the pre-post gain, both in topic knowledge and self-efficacy beliefs. However, a positive correlation was found in the writing with feedback condition between the length of the comments made to the peer's text and the performance at the post-test. Moreover, participants, regardless their ease with the writing task, appreciated the opportunity of giving and receiving comments from their colleagues. These findings encourage further design and study of theory-driven instructional activities involving individual and collaborative writing.

✉ [giulia.ortoleva@unige.ch](mailto:giulia.ortoleva@unige.ch)

## **Spontaneous feedback among students in a small group collaborative writing task**

Teresa Mauri & Javier Onrubia

Department of Developmental and Educational Psychology, University of Barcelona, Spain

Collaborative writing is a usual activity in university courses, and learning to write collaboratively is a main general competence of university students to attain. However, learning to write, learning to collaborate, and learning to write collaboratively is difficult. Students have spontaneous forms of collaborative writing that are not optimal, and that can interfere their learning of more expert collaborative writing strategies. All these difficulties may increase when students write collaboratively in virtual learning environments. From these ideas, our study aims to better understand spontaneous feedback among the members of small groups of university students dealing with collaborative writing tasks in a virtual learning environment. In the study, collaborative writing in virtual environments is viewed as a process of joint construction of shared meanings. In this process, students have to co-construct both the procedures for planning, translating and reviewing the text, and the content of the text itself. Spontaneous feedback among the students all along the annotation of the text is considered as a central part of this process.

Following an observational, case study methodology, four small groups of undergraduate students in an Educational Psychology course were analyzed. Each group had to collaboratively write an essay (6-8 pages) on “Motivational factors in school learning”. Categories of analysis were established as the result of a repeated process of back and forth between theory and data. The analysis tried to cope with four main questions: (i) what kind of actions do the students of each group develop along the collaborative writing process and what is the place of feedback among these actions? (ii) where in the virtual learning environment is feedback given (inside the text documents, outside the text documents) (iii) what are the features of the feedback given inside and outside the text documents (iv) what similarities and differences do those features show among the different groups?

Results showed that (i) the groups widely varied in the kind of actions that they developed along the collaborative writing process and in the amount of feedback that their members gave to each other (ii) feedback was given both inside and outside the text documents (iii) two different kinds of feedback appeared typically in the different groups: conversational exchanges, both inside and outside the text documents, and direct textual changes to the text (iv) the different groups showed both similarities and differences in their spontaneous feedback patterns and collaborative writing procedures.

Both virtual teachers and VLE designers can benefit from better knowing these kinds of spontaneous patterns and procedures, in order to effectively teach students more expert collaborative writing strategies.

✉ [teresamauri@ub.edu](mailto:teresamauri@ub.edu)

### **How do students utilize teacher's feedback and peer feedback in online learning environments?**

Teresa Guasch<sup>1</sup>, Anna Espasa<sup>1</sup>, Ibis Alvarez<sup>1</sup>, & Paul Kirschner<sup>2</sup>

<sup>1</sup>Department of Psychology and Education, Elearn Center, Universitat Oberta de Catalunya, Spain

<sup>2</sup>Celstec, Open University, the Netherlands

Feedback in this paper is understood as formative feedback (Shute, 2008). It is defined as the information, which helps the students to progressively assume learning objectives with the purpose of improving learning. In a previous study it was concluded that epistemic feedback requiring critical explanations and clarifications best promotes collaborative writing performance in online learning environments (Guasch, Espasa, Alvarez, & Kirschner, submitted). However, there is not much evidence on how teacher's feedback and peer feedback affect the collaborative writing process in technology enhanced environments for asynchronous and written communication. That is, how students utilize the feedback received and which kind of changes they make into the essays that they write collaboratively. The present study aims to investigate the influence of teacher feedback and peer feedback in the writing process. Two questions were addressed in our study: How do students utilize teachers' feedback and peer feedback? Which kind of changes do they make into the essays with the teacher feedback or the peer feedback?

The research was carried out within the virtual campus of the Open University of Catalonia. A quasi-experimental design, with a multi-method methodology in the information analysis was used. The study took place in a 15-week, 6 EC module in the Psychology Bachelor's degree. For the intervention, students were randomly assigned to 8 experimental groups, which varied with respect to the type of feedback (corrective, epistemic, suggestive, and epistemic + suggestive), and the feedback-giver (teacher feedback and peer feedback). Peer feedback was given or received by the group that was in the same condition. Measures used were: feedback implementation, writing process (through students' interaction and changes on texts) and writing performance (adapting Reznitskaya et al., 2008 proposal).

To analyse how students utilize the feedback a categorization model for the analysis of written and asynchronous group interaction was designed. The model is based on the review of 13 instruments and it is made up of three dimensions: 1) student's participation, 2) nature of student's learning, and 3) quality of student's learning. The first results show different patterns of interaction when students discuss the feedback to be introduced on the text depending on the type of feedback and the feedback-giver (i.e., teacher or teacher and peers). This presentation will report the results about students' online negotiation and the effect of feedback implementation into learning process and the final written product.

✉ [tguaschp@uoc.edu](mailto:tguaschp@uoc.edu)

**EGWA (Early Grade Writing Assessment):  
A tool for writing assessment in early grades**

Juan E. Jiménez

University of La Laguna, the Canary Islands

Recent research has included a variety of writing tasks based on theoretical framework. There should be a clear link between the theoretical construct and the data generated by the actual assessment. Berninger (2000) developed a framework for understanding the writing development of younger students or students with low-level writing skills. Berninger's *Funcional Writing System* consists of four components: transcription, text generation, executive functions, and memory. Based on previous empirical evidence and framework cited above, we designed Early Grade Writing Assessment (paper and pencil) (EGWA-PP) for Spanish-speaking countries and this initiative has been supported by United Nations Educational, Scientific and Cultural Organization (UNESCO). The intent of EGWA is to document student skill in composing units of increasing complexity (letters, words, sentences, and stories) to communicate meaning. We are interested in developing a tool for writing assessment based on analytic scoring procedures that demonstrate adequate technical features for screening and progress monitoring. The validation and standardization of EGWA-PP is being carried out in the Canary Islands (Spain) in twelve schools using a cross-sectional design with a sample of 1800 first, second and third grade Spanish monolingual students. A total of 25 trained examiners are administering EGWA-PP that contains ten tasks ranging in difficulty from copying letters to story writing. The first four tasks consist of copying (copying letters, copying words, and copying sentence). The next four tasks consist of dictating activities (dictating words and pseudowords, dictating sentences). Tasks 9 and 10 are free-writing tasks (writing sentences, writing a story). The student is prompted to copy or write each letter, word, or sentence exactly as it is shown in the test protocol or dictated by the evaluator. Preliminary results will be presented in this meeting.

✉ [ejimenez@ull.es](mailto:ejimenez@ull.es)



**Assessing text quality: Explaining and comparing different rating scales**

Jörg Jost<sup>1</sup>, Matthias Knopp<sup>1</sup>, Michael Becker-Mrotzek<sup>1</sup>, & Joachim Grabowski<sup>2</sup>

<sup>1</sup>University of Cologne, Germany

<sup>2</sup>Leibniz University Hanover, Germany

Assessing text quality is an important task in various domains. In school, the evaluation of text quality aims to give individual feedback to individual writers. On the contrary, large-scale writing assessments like those within the NAEP program (National Assessment of Education Progress), or in similar German screenings, aim to assess the level of skills and abilities for an entire population (of, e.g., 8th-graders). Third, text quality assessment is also important for empirical studies that focus on the writing process or on writers' abilities under certain (sometimes laboratory-like) conditions

Our report relates to an interdisciplinary research project on the subcomponents of writing literacy (funded by the German State Ministry for Education and Research), where we focus on three facets of 5th- and 9th-graders' writing abilities that are supposed to support text quality across several genres, namely report, instruction, and argument: (a) the ability to take into account the reader's perspective, (b) the ability to create coherent structures through appropriate linguistic means, (c) adequate vocabulary use for the given purposes.

Some 1400 texts, obtained under highly controlled conditions, were independently rated according to different scales. An analytic scale, involving genre-relevant linguistic criteria, was inductively developed on the empirical basis of the available texts, along with benchmark texts to be used when training the raters. Moreover, holistic ratings were obtained from trained teacher students according to the NAEP five-level scoring guide, and from naive students according to school grades.

After a discussion of the theoretical concept of text quality and the related linguistic criteria, we will explain the different rating scales and report on their inter-rater reliabilities as well as on the interrelations between the different rating approaches. Which type of quality rating can be best predicted from the individual subcomponents of writing ability? Which genre (report, instruction, or argumentative text) allows for the most reliable and predictable quality ratings? And what do we gain, with which effort, from analytic as compared to holistic approaches in cross-genre assessment of text quality?

✉ joerg.jost@uni-koeln.de

### **Alternative assessment methods for writing**

Ioannis Dimakos, Dionsios Lavdas, Evgenia Triantafyllaki, & Giannis-Stefanos Efthimiou

University of Patras, Department of Primary Education, Greece

The purpose of this paper is to report on alternative methods for the assessment of student writing skills: teacher ratings and curriculum based measurement (CBM) in spelling and writing. Teacher ratings have a long history in the field of assessment having been used since the early days of psychometric assessment. Usually given in the form of a Likert-type scale, teacher ratings have been identified as accurate, reliable and valid methods for the identification of Learning Disabilities. Similarly, curriculum based measurement probes in spelling and writing have been proposed as viable, alternative methods for the assessment of students' spelling and writing capabilities for the past three decades instead of (or along with) standardized tests. In the present study, 140 students attending various randomly selected schools in western Greece were given various CBM writing and spelling probes. The probes examined a variety of CBM indices, such as correct letter sequences and number of spelling errors (for the assessment of spelling), as well as total words written, words spelled correctly and correct word sequences (for the assessment of writing). At the same time, teacher ratings of spelling and writing (in the form of a 5-point Likert-type scale, where 1= very low ability and 5 = very high ability) were selected from their teachers. Results suggested statistically significant correlations between teacher ratings and CBM indices of writing ability. In addition, there were also statistically significant correlations between teacher ratings and CBM indices of spelling. However, because of the high correlations between the teacher ratings of writing and spelling, partial correlations between the relevant CBM indices and teacher ratings were also computed. Results suggested that all partial correlations between spelling indices and teacher ratings of spelling were significant, while they were not significant for writing. Based on these findings, teacher ratings and CBM in the early identification of writing and spelling problems could be used although their results should be further validated by other means of assessment.

✉ idimakos@upatras.gr

**Developing national standards for the assessment of writing:  
A tool for teaching and learning**

Ragnar Thygesen<sup>1</sup> & Rolf B. Fasting<sup>2</sup>

<sup>1</sup>University of Agder, Norway

<sup>2</sup>Oslo and Akershus University College of Applied Sciences, Norway

The paper reports from stage one of a project aiming at carrying out in-depth research on specified assessment norms for writing, and their subsequent effects on the quality of students' writing and teachers' rating.

The project builds on a social semiotic construct of writing that yields construct and content validity as well as principles for organizing standards and a multidimensional scoring instrument.

The project is designed in two stages. The objective of stage one (exploration) is to define which levels of writing competency should reasonably be expected at specified grades as a basis for setting explicit standards, in collaboration with 8 compulsory schools across Norway. The objectives of stage two (intervention) are, in collaboration with 16 schools, *a*) to investigate what effects a shared set of explicit standards for educational writing, across nationally distributed local learning ecologies, may have on the quality of teacher assessment, in particular for rater agreement, and *b*) to investigate what effects an integration of shared explicit standards in teaching may have on the quality of students' writing.

During spring this year, 47 teachers with a particular interest in writing, were introduced to our theoretical construct, and asked to provide experienced-based drafts of norms for communicative and semiotic aspects of writing. Their students were also assigned writing tasks that include specific directions as to writing acts and writing purposes, representing a source for assessment of central dimensions of a text. These data are collected during the spring-term.

Examples of writing proficiency expected at the end of grade four and seven regarding central dimensions of a written text (i.e. communication, content, composition, use of language, encoding and presentation), will be presented.

The results should initiate a discussion about the relationship between integration of explicit standards of writing performance and the effects on the quality of students' writing, as well as of the utility value of such standards as a basis for implementing nationwide tests of writing.

✉ [ragnar.thygesen@uia.no](mailto:ragnar.thygesen@uia.no)

## **Evolution of handwriting constraints from grades 2 to 9: Impact on spelling development**

Virginie Pontart & Denis Alamargot  
University of Poitiers & CNRS, France

This developmental study aims at specifying the evolution of mechanics and spelling during learning of writing. In the following of Fayol and Miret (2005), we expect an indirect impact of the level of handwriting performance on development of spelling. The developmental assessment of writing skills using temporal parameters (pause, rate), allow a better understanding of the relationship between handwriting and spelling factors.

Hundred participants from grades 2 to 9, divided into four groups, were asked to complete a series of simple handwriting (writing of name-surname, alphabet used by Abbott and Berninger (1993) as the best predictor of handwriting) and orthographic (dictation of words - more or less frequent and regular) tasks. The written production was recorded using “Eye and Pen” software (Alamargot, Chesnet, Dansac, & Chesnet, 2006). The pauses and rates characterizing each item and exercise were considered. The investigations confirm the sensibility of temporal parameters for assessing the evolution of spelling skills and show three main results:

- Analysis of mechanics leads to consider alphabet production as a specific task, involving not only graphomotor processing (like the name/surname task). Indeed, the writing speed of graphomotor tasks continues to increase during development while a slowdown in speed is observed in college, for alphabet task compared with name/surname task.
- While the writing speed of graphomotor continues to increase, a plateau effect is observed between grades 4-5 and 6-7 on the writing speed of words production. In the same time, in grades 6-7, results show presence of parallel processing impacting the writing speed, specifically when the word is difficult to write (non-frequent and irregular).
- Analysis of spelling skills shows a significant decrease in the percentage of errors and, as expected, a frequency x regularity effect on spelling errors and on temporal parameters. It indicates a progressive installation of mental lexicon. Indeed, an impact of regularity on frequent words is present until the grade 4-5, requiring pauses during writing production for processing phoneme-grapheme conversions. Moreover, although irregularities are stored and children make fewer spelling errors, processing frequent irregularity remains demanding and needs more pauses until grade 8-9.

Finally, results inform on: (i) the evolution of handwriting development and its restructuring (parallel processing) occurring in grades 6-7; (ii) the establishment (grades 4-5) and functioning (grades 8-9) of the double route system, and (iii) the relationships between handwriting and spelling development.

✉ virginie.pontart@univ-poitiers.fr

**The effect of language, spelling and handwriting on text quality and written language bursts in children with language impairment and typically developing controls**

Vincent Connelly<sup>1</sup>, Julie E. Dockrell<sup>2</sup>, Kirsty Walter<sup>1</sup>, Sarah Crittten<sup>3</sup>

<sup>1</sup>Oxford Brookes University, UK

<sup>2</sup>Institute of Education, UK

<sup>3</sup>Coventry University, UK

Hayes model of text production processes (Hayes, 2011) details how and why experienced writers produce writing in bursts. Written language bursts are interesting, according to Hayes, because they reflect translation and transcribing processes at work. Ten year old Portuguese speaking children were recently shown producing bursts in their writing (Alves, Branco, Castro and Olive, 2011) demonstrating that the writing burst is not just indicative of experienced writers. Hayes (2011) has speculated that burst length may be a useful indicator of developmental progress in writing and so could aid in the diagnosis of developmental writing problems. One group of children with severe writing difficulties are those with specific language impairment (SLI) who are typically very delayed in their writing attainment (Connelly, Dockrell & Barnett, 2011).

In this study we examine written language bursts in a sample of 33 children aged 11 years with specific language impairment (SLI). Comparisons of the children with SLI with an age matched group of typically developing children ( $N = 33$ ) and a group of younger language skill matched children ( $N = 33$ ) revealed the role of writing bursts as a key factor in differentiating writing competence. Interestingly, all the children produced the same number of writing bursts in a timed writing task and the bursts were of equal temporal duration. However, there was a significant difference in the average length of the bursts as measured by the number of words. Children with SLI produced a shorter number of words in each burst than CA group children but the same number of words as the LA group. For all groups spelling accuracy and handwriting speed were significant predictors of both burst length and text quality. The frequency of pauses at misspellings was related to shorter bursts. These results offer support to Hayes' model of text generation; burst length is constrained by both language and transcription skills. However, since the number of bursts did not differ and burst length was the key differentiator of performance then total word count measures provided as much a reliable way of assessing writing skills at this point in development as burst length.

✉ vconnelly@brookes.ac.uk

## **Writing difficulties in Swedish university students with reading and writing difficulties**

Åsa Wengelin<sup>1</sup>, Roger Johansson<sup>2</sup>, Victoria Johansson<sup>2</sup>

<sup>1</sup>Department of Swedish, University of Gothenburg, Sweden

<sup>2</sup>Centre for languages and literature, Lund University, Sweden

Writing difficulties are, as pointed out by Berninger et al. (2008), both under-recognized and under-treated. They are also under-researched compared to reading difficulties. This is despite the fact students with reading and writing difficulties, as well as their teachers, frequently rate writing as their greatest problem area. The few studies that exist indicate that these students produce shorter texts with more spelling errors and grammatical errors, lower lexical diversity, less syntactic complexity and lower perceived quality. Their production processes are less fluent and more linear than those of their peers (Berninger et al., 2008; Connelly et al., 2006; Mayes & Calhoun, 2006); Wengelin, 2002). These writers are usually very focused on spelling, and writing fluency usually predicts the characteristics of their finally edited texts.

We have earlier reported on the writing of Swedish adults with reading and writing difficulties who did not go to university (Wengelin 2002; 2007) and 15-year-olds who are in the end of their mandatory schooling (Wengelin, Johansson & Johansson in press). In this study we compare the expressive writing of university students with reading and writing difficulties with those of their peers without difficulties and discuss the results in relation to the results of our earlier studies. Ten university students with and twenty without reading and writing difficulties participated. The participants were selected through a careful screening process, consisting of standardized tests of spelling and word decoding. We analyzed their texts for all the above-mentioned variables. As could be expected, the students with reading and writing difficulties had poorer results than their peers on all these measures. On the other hand they achieved better results than the groups in our earlier studies. More interesting was the result that neither spelling difficulties nor writing fluency correlated with any of their text characteristics. This indicates that these students are less focused on spelling difficulties and less linear writers than the groups in our earlier studies. An important question is whether they reached university because they were among the more high-performing students with reading and writing difficulties already in school or if they developed these skills through writing at university.

✉ [asa.wengelin@gu.se](mailto:asa.wengelin@gu.se)

## Does cohesion rely on visual feedback from the emerging text?

Gunn Helen O. Oxborough<sup>1</sup> & Mark Torrance<sup>2</sup>

<sup>1</sup>University of Stavanger, Norway

<sup>2</sup>Nottingham Trent University, UK

The sub processes of monitoring and revision in Flower and Hayes cognitive model (1996) rely on the visual feedback from the written text. In this model, it follows that visual feedback from the emerging text is a vital aspect of writing, especially to ensure a coherent text. The present study explores whether it is possible to write coherent texts without visual feedback from the text, and if so, what significance this has for our understanding of the process of writing.

In our paper we will present a study designed to explore the role of feedback from the text for cohesion in text. In the study 36 undergraduate students were asked to write argumentative texts for 20 minutes under “blind” and normal conditions, with order counterbalanced. Participants composed by keyboard, using a simple text editor. In the blind condition the editor software was manipulated such that all letter and punctuation key-presses appeared on the screen as Xs. Spaces between words appeared normally. The X-representation of each letter provides the writer with a spatial orientation of the text, giving feedback about how much had been written, and confirmation that the striking of a key had, in fact, been recorded. Beyond this, it prevented any visual feedback from text-already-written. In the normal condition text appeared on the screen normally. We collected keystroke and eye-movement data. The focus of this paper will, however, be on an analysis of the final texts.

Final texts were analysed in terms of all 54 of the different variables provided by Coh-metrix (McNamara, Louwerse, Graesser, 2002). Together these provide a rounded characterisation of the text, with a particular focus on its thematic and syntactic coherence. Students in both conditions produced coherent texts. Preliminary analysis of a subsample of the texts suggests no statistically reliable differences between the two conditions. These results suggest that visual feedback from the text during writing is not essential for writing relatively short coherent texts by experienced writers. In our paper we will present findings from all participants.

✉ [gunn.h.oxborough@uis.no](mailto:gunn.h.oxborough@uis.no)

**P1-II: Writing Acquisition difficulties in French adult literacy students: A comparison with reading level-matched children**

Nadia Bontemps, Elsa Eme, & Thierry Olive  
University of Poitiers & CNRS, France

The present study investigates the processes involved in writing acquisition in adults who are functionally illiterate (A-IL), and the relationships between their written skills, oral language and general capabilities of cognitive efficiency. Research on the processing of written language in low-skilled readers, which is based on models of children acquisition of reading (Frith, 1985), has shown phonological difficulty in reading and in writing in A-IL (Eme, 2006; Greenberg, Ehri, & Perin, 1997, 2002). However, few studies have investigated skills in other domains related to their failure in the acquisition of written language, in order to ascertain whether A-IL do indeed have a single set of specific deficits or whether instead they display several distinct patterns.

In that context, we aim at proposing a typology of difficulties of A-IL in relation with linguistic skills and their general cognitive capabilities. For that purpose, we compared 52 A-IL with 52 primary school children, matched on their reading age. All A-IL participants were enrolled in an adult literacy program designed to give them the basic skills they needed to find and hold down a job. All participants were native French speakers living in the same geographic area. They all performed several computerized tasks that assessed their reading and writing skills as well as their cognitive functioning. Each assessed domain included distinct measures of phonological, lexical, syntactic and semantic processing (Eme, Lambert, & Alamargot, 2011).

The results of the study indicate that A-IL and the control children exhibited similar performances in word reading and writing. However, A-IL showed difficulties with pseudo-words that seemed more related to a phonological difficulty than to lexical or semantic problems. Complementary analyses of the cognitive functioning of the A-IL are in progress in order to determine the influence of elementary cognitive skills such as phonological awareness, visuo-attentional span, and working memory on the writing performances of the A-IL.

The present study of A-IL, which refers to complex relations between the cognitive and linguistic development and the social and familial environments, may help in constituting learning programs centred on the individual characteristics of functional illiterate adults.

✉ [nadia.bontemps@univ-poitiers.fr](mailto:nadia.bontemps@univ-poitiers.fr)



**P2-II: The acquisition of orthographic representations:  
A longitudinal study with Portuguese first graders**

Ana Sucena<sup>1</sup> & São Luís Castro<sup>2</sup>

<sup>1</sup>Instituto Politécnico do Porto, Portugal

<sup>2</sup>Universidade do Porto, Portugal

Each alphabetic system has its own orthographic structure (e.g, legal letter combinations). The fluent reader has an implicit knowledge of these orthographic rules; what about the beginning reader? In order to understand if children develop orthographic representations during the foundation period, we created two sets of pseudowords. Both sets have legal phonological sequences but differ on the orthographic legality: pseudo-words have legal orthographic sequences while non-words have illegal orthographic ones. We expect that, in the beginning of first grade, children will have similar pseudo and non-words results, as they do not yet master letter sequencing rules. Better performance for pseudo-words than for non-words indicates that children are sensitive to the legality of letter sequences, and therefore have already acquired some orthographic knowledge. 23 Portuguese-speaking first graders were tested four times across the school year, in October, December, March and June. Our results reveal that it was in the second half of the school grade that a difference arose, with pseudo-words being spelled and read significantly better than non-words.

These results suggest there are two steps in the alphabetic process. Initially, decoding and spelling skills are based in one-to-one mapping conversions and are relatively insensitive to the statistical regularities of graphemic sequences. In a second step these regularities are integrated in the decoding and spelling processes.

✉ [sucena.ana@gmail.com](mailto:sucena.ana@gmail.com)

### **P3-II: The development of pre-writing skills: A pilot study**

Silvia Baldi, Andonella Devescovi, & Emiddia Longobardi  
University of Rome 'Sapienza', Italy

Production of a written text involves the coordination of many skills. Handwriting represent one of main component of writing abilities (Feder & Majnemer 2007). Many studies suggest that handwriting is an important factor in composition of young children and that the poor automaticity of handwriting may interfere with the text composition (Graham et al, 1997, Medwell & Strand, 2009). For this reason it may be important to explore the development of handwriting skills as early as preschool age. The skills that contribute most to handwriting are motor skills, hand-eye coordination, attention, visual-motor integration and perceptual skills (Volman et al., 2000). There are few recent studies that have investigated the development of handwriting skills from 3 to 6 years. (Tolchinsky-Landsmann, 2003; Levine & Bus, 2003).

The aims of this pilot study were: a) to explore the development of pre-writing skills in preschool children; b) analyze the relationship between the basic skills and pre-writing abilities in the different age groups.

Thirty-nine preschool children (21 boys and 18 girls; 36 to 65 months) participated at this study. They were divided into three age groups: 3 years old ( $n = 15$ ,  $M = 38$  months), 4 years old ( $n = 16$ ,  $M = 50$  months), 5 years old ( $n = 8$ ,  $M = 61$  months). To evaluate pre-writing skills was used the Shore Handwriting Screening (SHS, Shore, 2003), this non-standardized tool includes observation of the child's postural and hand control, bilateral hand skills, in-hand manipulation and the child's ability to letter formation. In addition were evaluated visual-motor integration and visual-perceptual skills (VMI), receptive vocabulary (PPVT), nonverbal ability (Raven's CPM) and attention ability (Barrage Leiter-r). The results showed that the older children performed better than the younger children in every skills investigated. There were no significant differences between 4 years and 5 years old children in visual-perceptual skills and in the SHS scores. The relationship between the SHS and VMI scores was significant at all age. The correlation between SHS scores and Barrage scores was significant only at 4 years. These interesting preliminary results seem useful to define different developmental profiles in pre-writing skills in preschool children.

✉ [silvia.baldi@uniroma1.it](mailto:silvia.baldi@uniroma1.it)

#### **P4-II: Improving narrative writing through peer observation and language training**

Victoria Johansson, Viktoria Åkerlund, Birgitta Sahlén, & Joost van de Weijer  
Lund University, Sweden

Narrative skills appear to be fundamental for the development of other genres. For instance, Davies et al. (2004) showed that children with delayed language development typically have limited abilities to understand and tell stories. Other studies have shown that narrative intervention with repeated story telling and focus on narrative macrostructure facilitate improvement in narrative micro- and macrostructure (Petersen, 2011).

The aim of this study was to investigate what aspects of the narrative ability can be enhanced by language intervention. With the purpose of eventually increasing our knowledge on how to improve the story-telling skills of language impaired children, we designed an ABA-inspired intervention study to improve the narrative skills for children with typical linguistic development.

Five 11-year-old children participated in the study. They were divided into 2 dyads, and one single participant (due to participant drop-out). The comparative data consists of 40 written narratives (8 texts/child), from 3 baseline tests (A), 3 tests during the intervention period (B), 1 post test (A) after three weeks, and 1 follow up-test (approx. after 3 months). The intervention period consisted of in total 12 meetings with a speech language therapist. Each meeting followed a training procedure (based on Åkerlund & Sahlén 2010), practising oral narrative, lexical knowledge, written narrative, and narrative meta-knowledge. Peer observation in the dyads comprised an essential part of the procedure.

We analysed: 1) length measures, i.e. number of words, clauses and t-units; 2) measures of syntactic complexity, i.e., clauses per t-unit; 3) lexical measures, i.e. lexical diversity and density; and 4) story-grammar (modified from Stein & Glenn 1979).

The findings showed an increased text length, a significant increase in story grammar points and a strong tendency of increased lexical diversity. Last but not least, the children in each dyad followed each other's development of story grammar.

✉ victoria.johansson@ling.lu.se

**P5-II: Are there differences between dyslexics and normally achieving readers in narrative writing?**

Isabel O'Shanahan, Juan E. Jiménez, & Ana Delia Jiménez  
University of La Laguna, The Canary Islands

The main purpose of this study was to examine whether there are significant differences between normally achieving readers and dyslexics in written narrative skills. The study sample consisted of a total of 556 students from the city of Guatemala, public and private schools: 315 boys and 241 girls of primary school aged 8,8 months and 14 years, 7 months of age ( $M = 134.5$  months,  $SD = 16.1$  months). We analyzed written narrative skills through different written composition tasks: writing of a history based upon vignettes, and writing of a tale in dyslexics and normally achieving readers. Our prediction was that the reading level of the students determine different results in texts written tasks, namely that dyslexics have poorer performance than normally achieving readers in the telling of a story and writing a story from vignettes. Overall, we found that normally achieving readers had higher scores than dyslexics in both tasks, but we did not find significant differences between groups when we analyzed the specific dimensions of structure of a story or tale.

✉ [ioshanah@ull.es](mailto:ioshanah@ull.es)

**P6-II: How narrative structure changes in the stories written by Italian children of primary school**

Emiddia Longobardi , Marialuisa Renna , & Pietro Spataro

Department of Dynamic and Clinical Psychology, Sapienza University, Italy

Narrative discourse represents an essential mechanism for making sense of human experiences and relationships, providing “the major link between our own sense of self and our sense of others in the social world around us” (Bruner, 1986, p.69). A long tradition of research (Allen, Kertoy, Sherblom & Pettit, 1994; Hudson & Shapiro, 1991; Peterson & McCabe, 1983) has shown that, in the oral modality, children are capable of producing complete personal episodes by the time they enter first grade, whereas they often engage in unstructured event descriptions when telling fictional stories.

In the present study we investigated differences between three types of narratives written by a sample of 150 Italian children in the third, fourth and fifth grade (from 8 to 11 years of age). Each participant composed fictional, personal and hypothetical stories. In particular, in the latter task children were requested to write an imaginary story in which they themselves were the main characters. Narrative structure was analyzed using the categories proposed by Stein and Glenn (1979): Presentation, Description, Event, Internal Response, Planning, Action, Direct Consequences and Conclusion. A global index of narrative completeness was obtained by counting the number of different categories included in each story (range: 0-8).

The results indicated that narrative completeness was greater for fictional and hypothetical stories than for personal narratives. Furthermore, significant differences between the three stories were found in all categories, except for Event and Planning. Children used Presentation, Internal Response and Conclusion more frequently in fictional and personal narratives than in hypothetical stories. On the other hand, the Action and Description categories were employed more often in hypothetical and personal stories, respectively. These findings suggest that school-age children make clear differentiations between the three narrative tasks and that, contrary to what happens in the oral modality, they are more proficient at producing fictional than personal stories.

✉ [emiddia.longobardi@uniroma1.it](mailto:emiddia.longobardi@uniroma1.it)

**P7-II: Collaborative writing: Co-regulation strategies of high school students  
to write an argumentative text**

Maria Olga Fuentealba, Mariona Corcelles, & Montserrat Castelló  
Universitat Ramon LLull, Spain

The regulation of the writing process is a complex activity which influences text quality and, in educational contexts, it affects the quality of learning (Castelló, Bañales y Vega, 2010; Hadwin, Oshige, Gress y Winne, 2010). Likewise, collaborative learning in classroom has proved to be useful in improving student learning (Corcelles, 2010; Castelló, González y Iñesta, 2010). Although collaborative learning and writing regulation are usually present in educational curriculums and in education research agendas, there are still few studies aimed at relating these two processes in authentic educational settings.

We present a exploratory study of multiple cases which aims to understand the students' co-regulation processes when writing collaboratively argumentative texts in class and link this regulation with text quality. This study is part of a broader research focused on improving the teaching of philosophy using writing as a learning tool.

The sample was shaped by two teams of 3 high school students. The writing processes developed in 3 sessions were recorded using Camtasia. Considering that information, a new unit of analysis was proposed in order to reduce data in a comprehensive way without losing the overall picture of the process: the Regulation Episode (RE) (Zanotto, 2006; Castelló & Iñesta, 2007), which we have defined as the sequences of actions that authors strategically implement with the objective of solving a difficulty identified during the writing process. Two types of episodes were defined according to their function in the process: regulation episode of argumentation (REA) related to the thesis, the conceptualization, the arguments and philosophical question of de philosophical argumentative text, and Regulation Episode of the writing sequences (REWS) related to planning, textualization, and revising the text. Two independent judges participated in the categorization of the data, their agreement reached 83%.

Results showed that text quality varies depending on differences in the Regulation Episodes during the process of writing. Higher text quality was related with more Regulation Episodes (REA) aimed at discussing the thesis, and planning and elaborating the text (REWS). The lack of some specific RE throughout the composition process is associated with difficulties in maintaining a clear line of argumentation in the text.

The analysis allows us a deeper understanding of the dynamics of writing regulation and to develop guidelines adjusted to student's needs and difficulties when regulating their argumentative writing activity.

✉ MariaOlgaFC@blanquerna.url.edu

**P8-II: The impact of three intervention programs to improve  
the quality of argumentative synthesis**

Jara González-Lamas, Isabel Cuevas, & Mar Mateos  
Universidad Autónoma de Madrid, Spain

The present study is by a research group interested in reading and writing as learning tools at different levels in the education system.

More specifically, the overall objective of this study was to evaluate the effectiveness of three types of intervention aimed at improving the quality of secondary school students' written argumentation. The first type of intervention consisted in explicit teaching about what a synthesis is, after which the participants produced two syntheses in pairs and were given feedback on both process and product. The second type was the same as the first, but also included a modeling session, while the third type also included a writing guide to support pair work.

A second, more specific, objective was to explore whether there were any differences between the impact of each type of program related to certain student characteristics of the students, specifically, their beliefs about academic writing and their perception of their efficacy as writers.

Altogether 105 third-grade secondary education students (14-16 years old) participated in this study; 39 in the first group, 31 in the second and 35 in the third.

In order to establish the students' progress after the program, the quality of their written syntheses was assessed on the basis of these criteria: selection of the arguments from the source texts, elaboration of arguments, intratextual integration and intertextual integration.

It was found that the quality of the students' written syntheses on all three intervention programs improved equally according to all quality measures but one: the intertextual integration criterion showed differences by program type. Furthermore, we found that not all students benefited equally from the three types of program and that this was due, in part, to the beliefs they held about academic writing. Overall, students with higher epistemological beliefs benefited more from the program with modeling session and writing guide, whereas students with lower epistemological beliefs improved the quality of their argumentation synthesis in the explicit teaching program.

Results will be discussed in terms of their educational implications.

✉ [jara.gonzalez@uam.es](mailto:jara.gonzalez@uam.es)

**P9-II: Writing-from-sources: From a reproductive to a reflective interdisciplinary approach in Portuguese Higher Education**

Leila C. S. Rodrigues & José Lopes

Escola Superior Agrária de Coimbra/CERNAS, Portugal

The cooperation between a tongue teacher (T1) and a Forestry engineer teacher (T2) at Escola Superior Agrária de Coimbra, Portugal, resulted in a fruitful approach on writing-from-sources; a complex double task of reading-to-write (Spivey, 1997; Flower et al., 1990) considered a problematic topic in Portuguese Higher Education.

Text production based on the notions of macro and microstructure (Van Dijk, 1989), plagiarism (Swales & Feak, 2005) and citing authors (ISO 690.1987) were explicitly taught and worked by T1 with first year Forestry engineering students during a semester. After that, the students produced a text from three sources (with T2) on a single theme from the forestry scientific domain (sustainable forest management) under the perspective of “knowledge telling” (Bereiter & Scardamalia, 1987).

The positive results obtained under the guidance of both teachers were the basis for a new approach of writing-from-sources under the perspective of “knowledge transforming” (Bereiter & Scardamalia, 1987) in the second semester. The students had then classes with T2 and tutorial classes with T1. At the end of the school year, the students were asked to produce a paper about the role of the forestry engineer in the preservation of vegetable and animal savage life. The bases for that were the contents learned in the first semester and also two articles on natural reproduction given by T2.

The results of the interdisciplinary approach were quite positive under three aspects: reflective writing was observed in most of the texts; the students developed a feeling that academic writing is transversal to other scientific domains and may contribute to their success in them; good results encouraged other teachers to work interdisciplinarily.

✉ leilarod@esac.pt



**P10-II: Do we say that? Discourse assimilation through L2 doctoral students’  
web-mediated peer review practices**

Karyn Sandstrom

Umeå University, Department of Language Studies, Sweden

The role of social interaction in developing writing skills can be particularly important to L2 writers who have limited sources of support, but who must learn the implicit literacy requirements of their discourse. Studies on peer review (PR) in advanced writing show it can benefit students’ critical thinking, metacognitive skills, writing habits, and motivation. However, L2 research shows that a complex array of factors influences the outcome of PR, factors such as the homogeneity of the group, the language of feedback, the medium of communication, and the attitudes of the participants. This exploratory study investigates ways in which online peer review provides the means for writers to learn genre text types, disciplinary vocabulary, and discourse conventions. Specifically, it examines how and to what extent peer review can assist students’ assimilation to a research community. Analysis will focus particularly on the nature of comments, attention to genre-specific concepts, and students’ reported learning experiences.

Data was obtained from a 12-week research-writing course in the agricultural sciences. Nine students participated in four instructional units, each unit focussing on the salient features of a research section (introduction, methods, results, discussion). Under each unit, writers submitted the relevant text section to the online peer forum to be openly, asynchronously reviewed by a randomly assigned peer. Text sections were subsequently revised and submitted for content-expert feedback. These revised texts and the accompanying peer feedback were analysed to classify the nature of the comments and revisions, and their relevance to discourse assimilation. Students’ experiences were investigated with a post-course questionnaire along with pre and post-course interviews of a subset of participants. Interview transcripts are analysed using narrative inquiry, focussing on students’ motivations, habits and beliefs about learning to write research in a second language.

Thus far results indicate that students focus on accuracy of scientific protocol, specificity of discourse terminology, and clarity of message at the sentence level. Relatively few comments reflect constructs introduced in the course, and students rarely boach issues of authorial voice or strength of message. Interview analysis thus far indicates participants are inexperienced with peer review practices but have strongly embraced the practice. The questionnaire shows a similar pattern. Data are still being analysed.

✉ karyn.sandstrom@engelska.umu.se

**P11-II: Collaborative teacher training in writing: When teachers become writers**

Maria Teresa F. Almeida<sup>1</sup>, Ana Margarida Veiga Simão<sup>2</sup>, & Anabela de Abreu Malpique<sup>2</sup>

<sup>1</sup>Educational Sciences, University of Lisbon, Portugal

<sup>2</sup>Faculty of Psychology, University of Lisbon, Portugal

Several authors make the case that regular school teachers play an important role in how students learn and think their writing (see Berninger, 2011). As part of the social context in which students writing is developed, teachers may influence students' approach to writing assignments (Hayes, 1990) as well as their strategies, knowledge, will and skills found to be foundational to students' progress as writers (Graham & Harris, 2011). For such reasons, we concur with the need to promote teachers' understanding and awareness of the complexity of the writing process to increase the quality of writing instruction (Rijlaarsdam & Bergh, 2011).

The purpose of the present study was to examine the contributions of collaborative teacher training to the improvement of instructional practices in writing. Following an action research approach, five primary school teachers were asked to be part of a collaborative group and systematically analyse their own writing processes and practices, by placing themselves as teachers/writers. During two consecutive school years, they were also asked to analyse and share with the group their teaching practices and conceptions of writing and writing instruction. Therefore, this study focused on the following two issues: Can collaborative teacher training enhance teachers' understanding and awareness of their own writing processes and practices? In what ways will collaborative teacher training change teachers' conceptions of writing instruction and teaching practices?

To assess teachers' conceptions and practices several instruments were developed, including: questionnaires (Q1-Views about writing: knowledge of the writing processes; self-regulation in writing; teacher/student interaction; teacher's feedback); Q2-Teachers' Conceptions of Writing: writing instruction and professional development) ; observation; stimulated recall; narrative text production (teachers shared their written compositions with the collaborative group, reflecting on practice -processes, product and difficulties).

From content analysis, results indicated that through collaborative teacher training teachers developed a deeper understanding of the complexity of writing, of the writing processes and of possible writing difficulties; providing teachers with the opportunity to be reflective practitioners, collaborative teacher training was reported to change and enrich teachers thinking when designing specific lesson to develop students' writing skills. Changes in students writing performance were also reported.

✉ teresafalmeida@sapo.pt

**P12-II: Cognitive change processes of teachers in reaction to the implementation of a pedagogy of the use of feedback logs in subsequent FL writing tasks**

Astrid Eelkema

School of Education ILS, Radboud Universiteit Nijmegen, the Netherlands

**Background.** What teachers do in their classroom is largely determined by their beliefs (Pajares 1992; Borg 2006). Beliefs are roughly seen as referring to personal values, attitudes, ideologies, and knowledge to a teacher's more factual propositions (Verloop et al, 2001). Belief systems are dynamic, permeable mental structures, susceptible to change in light of experience (Thompson, 1992). Feedback is not only an important means to promote student learning (Black & William, 1998), feedback is also mutual: teachers receive feedback from the pupils to improve their teaching and to align the learning needs of their pupils (Bangert-Drowns et al, 1991).

**Aims.** In our research, we seek to elucidate the dialectic between teachers' beliefs and their classroom practice. The research aims to shed light on cognitive change processes of teachers in reaction to the implementation of a process-oriented design based on the principles of clarity of learning goals and instruction (Locke & Latham, 1990), self-regulation writing strategies (Butler & Winne 1995; Carduner 2007), and it covers feed-up, feedback and feed forward (Hattie & Timperley, 2007).

**Procedure and participants.** This multiple-case study is composed of three parts. The first part investigates teacher cognition and teaching practice of five FL teachers of French regarding their feedback practice in writing tasks in the upper secondary classroom with 16-years old pupils. During the second part, these teachers join in a learning community to elaborate with the researcher a process-oriented design. In the third part we will explore the impact of the implementation of this design on teacher cognition.

**Results of the first part of the research.** Data analysis is currently under way and focuses on defining the categories of teachers' pedagogical content knowledge (Meijer et al, 1999) about feedback on writing tasks (Lee 2002, Chandler 2003), based on qualitative content analysis of semi-structured interviews, concept mapping and classroom observation. We will describe the pedagogical content knowledge of these teachers, to what extent their beliefs match and differ, and analyze whether these beliefs are consistent or inconsistent with their classroom practice. Interview and observational data show that contextual factors such as team agreements and workload make it difficult for teachers to envision a process- and meaning oriented approach in the product- and grammar focused teaching culture in their schools. The teachers are preoccupied by language-related concerns, giving minimal attention to discourse-related or (meta)cognitive aspects of writing.

✉ a.eelkema@ils.ru.nl

**P13-II: Synopsis: A specialized methodological tool for teaching analysis**

Luciana Graça & Luísa Álvares Pereira  
Universidade de Aveiro, Portugal

The growing interest in all that concerns the teacher's activity in the classroom has been followed by an increasing number of research projects supported by audiovisual recording to capture exactly what happens in that context. An important question emerges for such projects: how can one treat and condense the overload of data collected through the videorecording of a class?

Based on a brief description of our own research, this contribution aims to present a methodological tool used, precisely, to treat and condense such filmed data (in this particular case, more than forty hours of recordings that were collected). This methodological tool, synopsis, is a general description of the main actions composing a teaching sequence, structured in different embedded levels. Furthermore, it provides an overview of each teaching sequence, allowing comparisons between them. In what concerns the research conducted, this one aimed to evaluate the potentially changing role of a didactic tool to the teaching of writing, and it was implemented in two phases: i) in the first one, each teacher was to teach the opinion text according to their own planning, defining duration and possible materials to use in the classroom; ii) in the second phase, the teacher was now to teach the same subject, and again establishing duration and the materials to use, but also making use of a new didactic tool provided by the researcher: a didactic sequence, distributed to each teacher.

This contribution hopes to present, therefore, the multipurpose nature of this methodological tool which, *grosso modo*, offers a method of dissection of the professional teachers' gestures possible to be observed, although it may also be adapted to other more specific research objects.

✉ luciana.luciana.28@gmail.com



**Friday, July 13**

**16:30 – 17:30**

*Main Auditorium*

## **J. HAYES LECTURE**

### **Working Memory in Written Composition: A Progress Report**

Ronald T. Kellogg

**Ronald T. Kellogg** received his Ph.D. from the University of Colorado in experimental psychology and holds the rank of Professor of Psychology at Saint Louis University. Author of *The Psychology of Writing* (1994), *Cognitive Psychology* (2003, 2nd Ed.), and *the Fundamentals of Cognitive Psychology* (2011, 2nd Ed.), his research currently focuses on the role of working memory in text composition and writing expertise. He is a consulting editor for the *American Journal of Psychology* and also serves on the editorial board of *Reading and Writing: An Interdisciplinary Journal* and the *Journal of Writing Research*.



## **Working memory in written composition: A progress report**

Ronald T. Kellogg  
Saint Louis University, US

A model of how working memory, as conceived by Baddeley (1986), supports the planning of ideas, translating ideas into written sentences, and reviewing the ideas and text already produced was proposed by Kellogg (1996). It integrated the central executive, phonological loop, and visuo-spatial sketchpad with the seminal Hayes and Flower (1980) model of written composition based on the evidence then available. A brief progress report from the past 16 years is offered here, drawing on key studies that have confirmed in some cases, and rejected in others, the model's assumptions. A core assumption is that planning, translating, and reviewing are all dependent on the central executive and substantial evidence has accumulated in support of this view. The findings of a key experiment using articulatory suppression as a tool for disrupting the phonological loop confirmed that the translation of ideas into a sentence requires verbal working memory as well as the central executive. However, the assumption that editing makes no demands on the phonological loop appears incorrect based on further research using articulatory suppression. The model assumed that planning would engage the sketchpad. Experiments using a 1-back visual secondary task confirmed this prediction, but showed it held only for the planning of sentences involving concrete words evoking imagery but not for abstract language. The spatial subcomponent of the sketchpad does not appear to be engaged by planning, but experiments using a 1-back spatial secondary task have yielded some conflicting results. Finally, a new previously unreported experiment attempted to dissociate the planning demands on the sketchpad from the translation demands on the phonological loop. Unrelated nouns were expected to demand more visual WM during planning compared with related nouns, but have no effect on verbal WM. On the other hand, translating ideas into passive sentences ought to demand more verbal WM relative to active sentences, but leave visual WM unaffected. As will be seen, the surprising and puzzling results fit neither prediction. In sum, major progress has been made but the goal of fully understanding how working memory supports written composition remains distant.

✉ [kellogg@slu.edu](mailto:kellogg@slu.edu)





## **PRE-CONFERENCE WORKSHOPS**

**Workshop 1: A generic XML-structure for logging writing**

**Workshop 2: ScriptLog, InputLog, and Writing Pro**

**Workshop 3: HandSpy: A new web tool to study writing in real-time**



**A generic XML-structure for logging writing**

Mariëlle Leijten<sup>1</sup> & Luuk Van Waes<sup>2</sup>

<sup>1</sup>Flanders Research Foundation - University of Antwerp, Belgium

<sup>2</sup>University of Antwerp, Belgium

This workshop aims to further discuss the implementation of a proposed “generic XML-structure” for logging human interaction with the computer, and to briefly report on the main (technical) progress (c.q. problems) of the different programs.

## **ScriptLog, InputLog, and Writing Pro**

Mariëlle Leijten<sup>1</sup> & Luuk Van Waes<sup>2</sup>

<sup>1</sup>Flanders Research Foundation - University of Antwerp, Belgium

<sup>2</sup>University of Antwerp, Belgium

This workshop is a follow up session to the COST IS0703 Antwerp Training School on “Writing Process Research 2011: Keystroke Logging and Eye Tracking”. It will cover the recent developments on Scriptlog and Inputlog, and the announcement of a new tool, WritingPro.

### **1. Update Scriptlog and Inputlog**

Both Scriptlog and Inputlog have made a lot of progress since last summer. Scriptlog has been fully reprogrammed and it will present the new program during the session. Inputlog will present an update. New features of Inputlog are the merging functionality and a fully rewritten revision analyses.

### **2. WritingPro**

We would like to invite you to please register on the WritingPro website. After registration you can upload the details of your research project so that other researchers know what you are doing. In the future we would like to encourage you to share your data collection and analysis techniques on the website.

The site [www.writingpro.eu](http://www.writingpro.eu) will be launched during the conference and it would be great if your project details are already available on the website.

### **HandSpy: A new web tool to study writing in real-time**

Rui A. Alves<sup>1</sup>, Teresa Limpo<sup>1</sup>, José Paulo Leal<sup>2</sup>, Carlos Monteiro<sup>2</sup>,  
Ilda de Jesus<sup>1</sup>, and Marcos Dias<sup>1</sup>

<sup>1</sup>University of Porto, FPCEUP, Portugal

<sup>2</sup>University of Porto, FCUP, Portugal

In the last three decades, the field of writing research has undergone an incredible development. This was partially due to a grown out interest on basic cognitive processes in writing, and to the increasingly sophistication and availability of real-time methods to study writing (Gregg & Steinberg, 1980; Olive & Levy, 2002). A very widespread method is the online recording of a writing assignment. Several logging tools allow the unobtrusive recording of writing whether it is done using a pen, a keyboard, a tablet, or a voice-recognition system. With high temporal accuracy, it is possible to study how writing processes evolve and interact over time, by gauging bursts and pauses. A particular constraint to the most of experimental logging tools is that they require individual data collection and considerable technological artifacts (e.g. computers, digitizing tablets, eye-trackers), which might threat the ecological validity of the writing assignment. These constraints can be lifted with a new tool that we are proposing and calling HandSpy. The HandSpy is a web-based software that allows the planning, implementation, and analysis of writing experiments. To collect writing data, the HandSpy uses apparently typical pen and dotted paper. However, an infrared camera at the pen's nib, allied to thousands of microdots printed on the paper, enables the recording of spatial and temporal coordinates about the pen trace. This procedure allows the software to reconstruct the handwriting strokes, as well as to collect temporal handwriting data.

The proposed workshop will provide participants with hands-on practice to gain experience with the software. Six crucial phases when using the HandSpy will be addressed: software installation, microdot paper creation, data recording, data upload, validation procedures, and data analysis. Each phase will start with a brief theoretical introduction followed by guided practice. At the end of the workshop, participants will have the fundamental know-how to use the HandSpy software in their own experiments.



## Index of Authors

Adams-Tukiendorf .....	140
Admiraal .....	178
Aillaud .....	103
Åkerlund .....	202
Alamargot .....	169, 195
Albuquerque .....	90, 156
Almeida .....	209
Alonso-Cortés .....	130
Alvarado .....	157
Álvares Pereira .....	143, 145, 170, 211
Alvarez .....	190
Alves .....	57, 102, 166
Alves Martins .....	90, 92, 132, 156, 158
Anson .....	72
Aparici .....	159
Apol .....	63
Arfé .....	168
Arseneau .....	116
Asker-Årnason .....	139
Baaijen .....	162, 185
Baldi .....	201
Barbeiro .....	142
Barbosa .....	102
Barnett .....	106, 120, 123, 125
Bate .....	58
Bazerman .....	43, 153
Becker-Mrotzek .....	59, 192
Bernicot .....	133
Berninger .....	165, 166
Betrancourt .....	188
Billmann-Mahecha .....	91
Birgisdóttir .....	134
Blaggan .....	122
Blanchard .....	94
Boella .....	106
Boily .....	129
Boivin .....	79, 97, 116
Boldrini .....	66
Bontemps .....	199
Bourke .....	94
Braaksma .....	87
Brandão Carvalho .....	161
Brand-Gruwel .....	163
Bressoux .....	167
Breuer .....	54
Broc .....	133
Calil .....	77
Caravolas .....	45
Cardoso .....	170
Carré-Bellec .....	100
Castelló .....	53, 70, 205
Castro .....	135, 200
Cattaneo .....	66
Certo .....	63
Chaney .....	55

Chanquoy .....	39, 96, 99, 104
Chenu .....	160
Chitez .....	109
Cogis .....	129
Connelly .....	78, 123, 168, 196
Corcelles .....	53, 205
Costa .....	102
Cournil .....	100
Coutinho .....	52
Critten .....	78, 196
Cuevas .....	206
Cumming .....	127
Dalet .....	103
Dannels .....	72
Davies .....	94
De Bernardi .....	168
De Cara .....	96
de Gloppe .....	113
de la Cruz .....	50
de Maat .....	144
de Smet .....	163
Defior .....	135
Devescovi .....	201
Dimakos .....	193
Dockrell .....	78, 168, 196
Donahue .....	55
Drexler .....	91
Drijbooms .....	93
Dubé .....	129
Eelkema .....	210
Eftimiou .....	193
Ehrensberger-Dow .....	42
Elf .....	172
Eme .....	199
Encinas .....	43
Escorcia .....	48
Espasa .....	186, 190
Fartoukh .....	39, 99, 104
Fasting .....	194
Favart .....	56, 133
Fayol .....	119, 165, 166, 167, 169
Felipeto .....	77
Fernández .....	157
Ferreira .....	75
Festas .....	75
Fidalgo .....	73
Fijalkow .....	158
Flouret .....	118, 169
Foucambert .....	117
Frid .....	138
Fryer .....	117
Fuentealba .....	205
Fürer .....	42, 110
Gaitas .....	132
Galbraith .....	162, 185
Gantenbein .....	42, 110
Gauvin .....	129
Gestsdóttir .....	134
Giera .....	67



Gierdowski.....	72	Mäntylä .....	137
Gonçalves .....	180	Martin .....	74
González-Lamas.....	206	Martínez .....	74
Grabherr .....	164	Mata Pereira .....	158
Grabowski .....	59, 105, 192	Mateos.....	74, 111, 206
Graça .....	145, 211	Mauri .....	189
Graham.....	41	Mazur .....	160
Grenner .....	139	McNamara .....	88
Groen .....	93	Ménard.....	56
Guasch.....	186, 190	Motta.....	66
Gustafson .....	183	Myhill.....	64, 80, 126
Harwood.....	71, 154	Negro .....	96
Hayes.....	149	Neumann .....	67
Hayes, J.....	166	Nguyen .....	178
Hazard .....	96	Nottbusch .....	164
Huhta.....	137	O'Shanahan .....	136, 203
Iñesta.....	53, 70	Oddsóttir .....	134
Iparraguirre .....	50	Olive .....	56, 100, 102, 108, 133, 199
Iran-Nejad .....	40	Oliveira .....	75, 170
Jacquin .....	114	Onrubia.....	189
Jansen .....	175	Ortoleva.....	188
Janssen .....	144	Ouellet .....	129
Jeffery.....	171, 173	Oxborough .....	182, 198
Jiménez, A. D. ....	203	Paduraru .....	118, 119, 169
Jiménez, J. E.....	136, 191, 203	Palviainen .....	137, 179
Jisa .....	160	Perkins .....	58
Johansson, M.....	138, 184	Perrin .....	42, 110
Johansson, R.....	138, 184, 197	Petric .....	71, 154
Johansson, V.....	138, 139, 183, 184, 197, 202	Philippakos.....	41
Jones .....	80, 126	Pinsonneault .....	79, 97
Joshi .....	44	Piolat.....	102, 103, 104
Jost .....	192	Plumb .....	125
Kalaja.....	137	Polleck .....	171
Kellogg.....	215	Pontart.....	169, 195
Keränen .....	43	Prata .....	75
Kirschner .....	163, 190	Prévost.....	129
Kittle-Autry .....	72	Proske .....	88
Knibbe .....	103	Prunty .....	125
Knopp .....	59, 192	Quinlan .....	81
Kruse .....	109	Raeds.....	89
Lahtinen .....	179	Ragnarsdóttir .....	134
Lai .....	101	Rebelo.....	75
Lambert.....	108	Reilly .....	101, 133
Lambirth.....	65	Renna.....	204
Larkin.....	122	Ribera .....	143
Lavdas.....	193	Rietdijk.....	144
Leijen, Ä.....	69	Rijlaarsdam .....	73, 74, 87, 89, 111,
Leijen, D. A. J. ....	69	.....	112, 144, 166, 178
Leijten.....	68, 163, 181	Rodrigues.....	207
Limpo .....	57	Roscoe .....	88
Lindgren .....	115	Rosenblum .....	124
Lines .....	49	Russell.....	155
Llaurado .....	47, 95	Sahlén.....	139, 202
Longobardi .....	201, 204	Salas.....	45, 159
Lopes .....	207	Salvador .....	90, 156
Lourenço .....	90	Sandstrom .....	208
Macaluso .....	63	Santos.....	143
MacArthur .....	41	Sausset.....	108
Malpique .....	209	Scheerer-Neumann .....	46

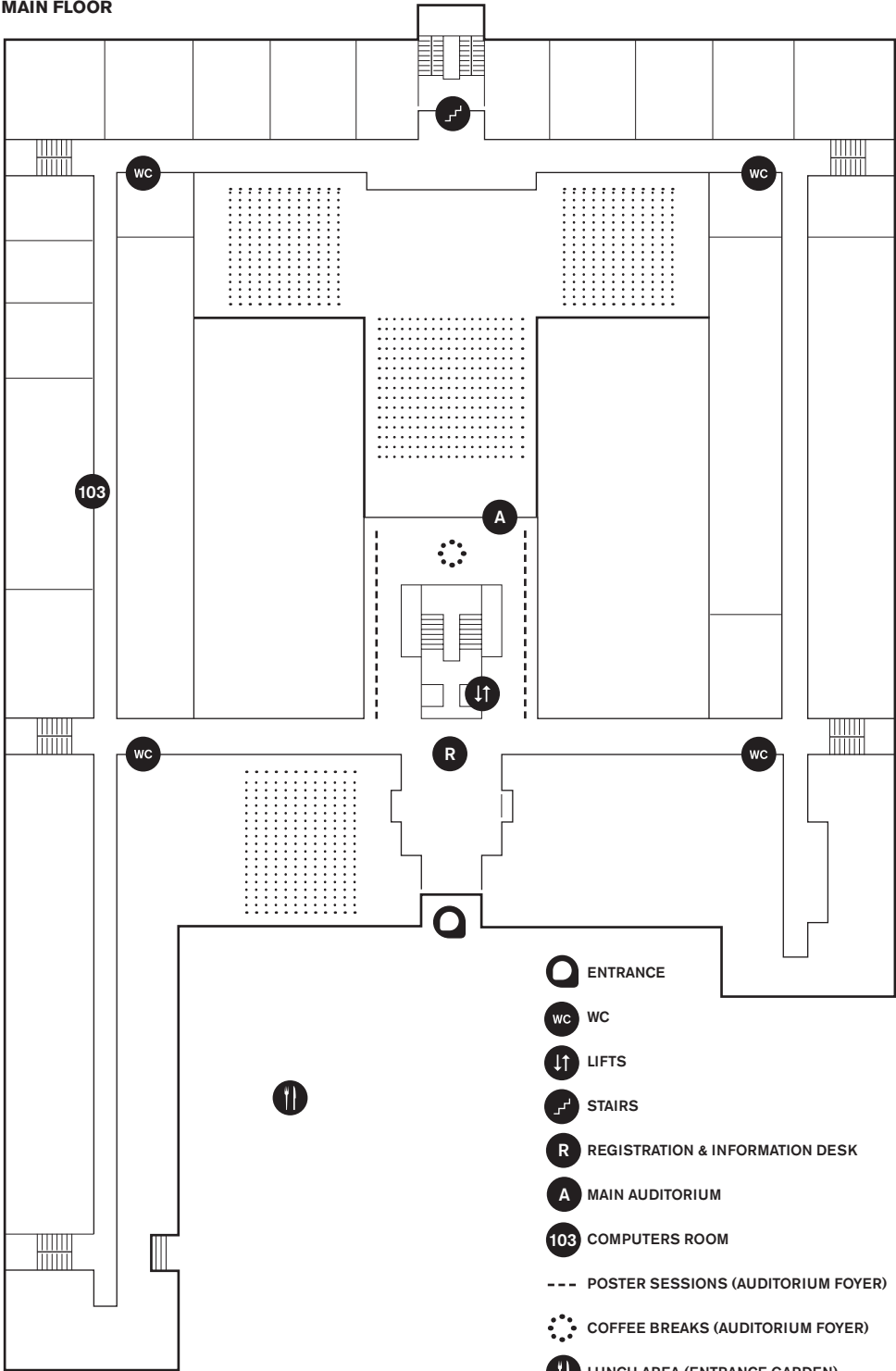
Scheuer .....	50
Schmitt .....	174
Schneevoigt .....	91, 131
Schneider .....	188
Schnitzler .....	46
Serrano .....	135
Sick .....	110
Silva .....	90, 177
Simon .....	153
Slusarczyk .....	167
Smeets .....	141
Sousa .....	75, 76, 180
Spataro .....	204
Spinillo .....	176
Stackhouse .....	58
Stevenson .....	115
Strobl .....	187
Sucena .....	135, 200
Sumner .....	123
Szymanska .....	98
Tachino .....	155
Thygesen .....	194
Tolchinsky .....	47, 95, 130, 159
Torrance .....	73, 182, 198
Triantafyllaki .....	193
Turcotte .....	129
Vale .....	76
van de Weijer .....	202
van den Bergh .....	73, 87, 111, 112
van Kruiningen .....	175
van Steendam .....	112
Van Waes .....	68, 181
Vasconcelos Horta .....	92
Veiga Simão .....	209
Verhoeven .....	93
Vernon .....	157
Villalón .....	111
Wagner .....	129
Walter .....	78, 168, 196
Weinzierl .....	107
Wengelin .....	138, 184, 197
Wilcox .....	128, 173
Wildi .....	110
Williams .....	122
Wilmut .....	125
Wilson .....	51, 60, 64
Yagelksi .....	128



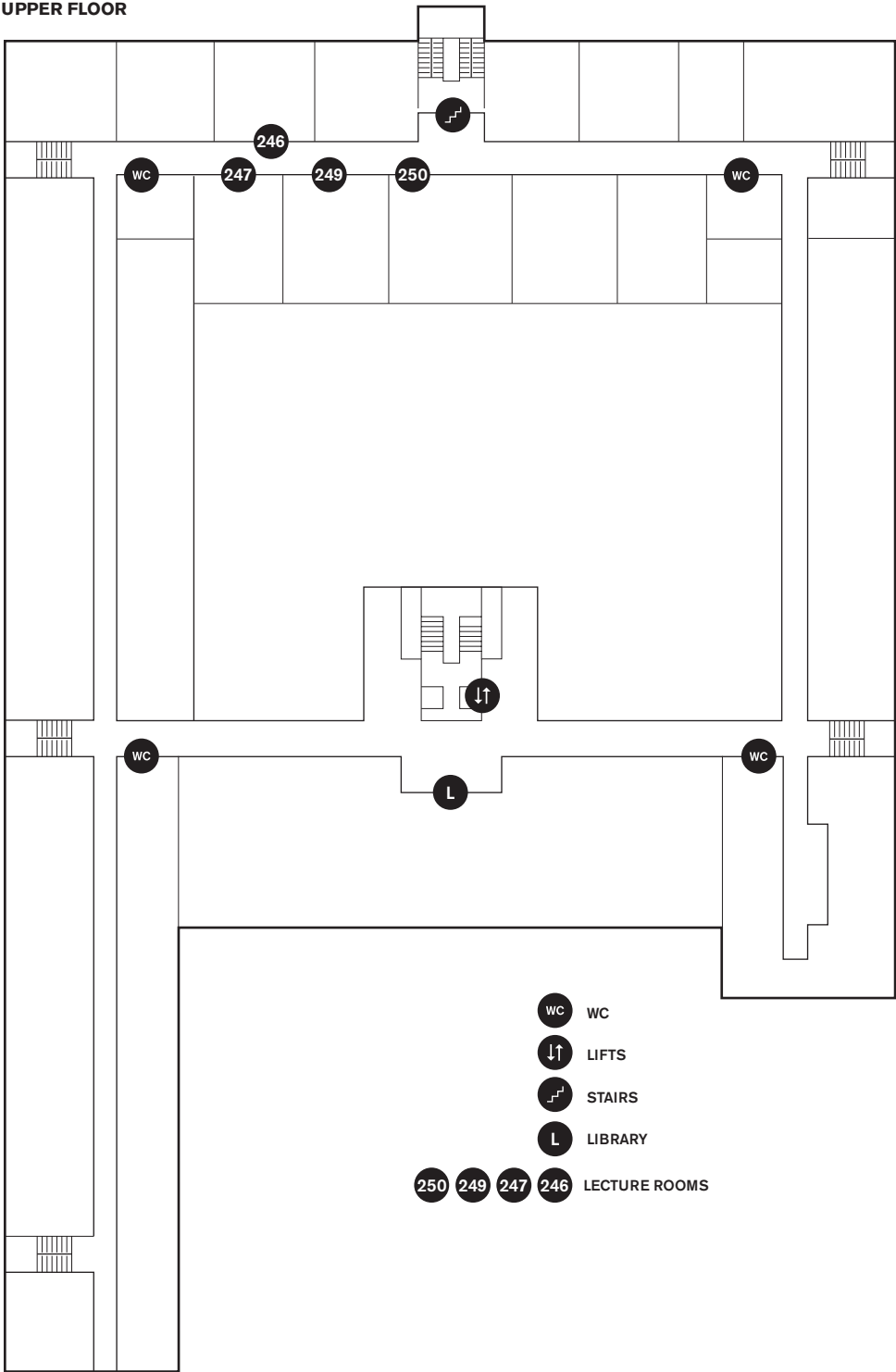


- WC
- CAFETERIA
- ATM
- LIFTS
- STAIRS
- COFFEE MACHINE

MAIN FLOOR



UPPER FLOOR





***SIG Writing, The Epicenter of Writing Research***