

HUMBOLDT-UNIVERSITÄT ZU BERLIN



13th International Conference on Textbooks and Educational Media

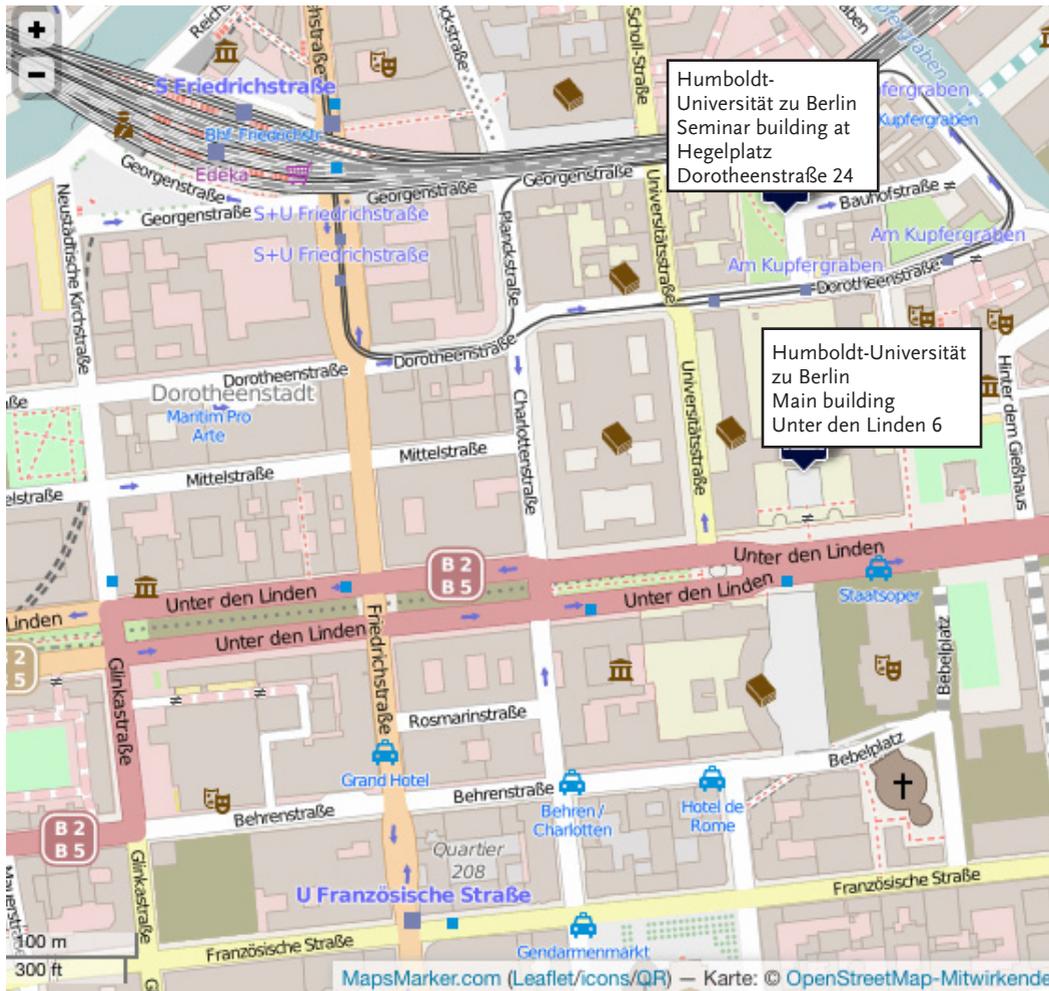
11–13 September 2015



Welcome to the 13th IARTEM International Conference on Textbooks and Educational Media in Berlin!

You will be joined by fellow scholars and practitioners involved in research on textbooks and educational media coming from 17 disciplines and 27 countries. The conference will be held from September 11-13, 2015, and will feature over 100 presentations, workshops, and round tables. For the first time in IARTEM's history, this year's conference sets a focus on the school subjects. Experts representing a variety of subjects will discuss educational media with general educational scientists, psychologists, but also practitioners. Have a nice conference!

Prof. Dr. Péter Bagoly-Simo



Humboldt-Universität zu Berlin – Main Building

Unter den Linden 6, 1st floor



Thursday 10 September PhD DAY

The PhD Day starts at **12:00**
in **room 1'206** of the **Geography Department**
(**Rudower Chaussee 16, 12489 Berlin**).
All participants received specific information via mail.

Friday 11 September 1st CONFERENCE DAY

8:30–09:30	Registration	Dorotheenstrasse 24, 5 th floor
09:30–10:00	Opening	Senatssaal
10:00–10:45	Keynote 1 Bruce Allen Knight (AUS)	Senatssaal
10:45–11:30	Keynote 2 Christoph Bläsi (DE)	Senatssaal
11:30–13:00	Lunch	Cafe „Cum Laude“
13:00–15:00	Parallel sessions A	Rooms 1201, 1604, 1503, 1504, 1505, 1506
15:00–15:30	Coffee break	Dorotheenstrasse 24, 5 th floor
15:30–17:30	Parallel sessions B	Rooms 1201, 1604, 1503, 1504, 1505, 1506
19:00	Conference Dinner	Brauhaus Lemke Am Hackeschen Markt Dircksenstr., S-Bahnbogen 143 10178 Berlin-Mitte

Saturday 12 September 2nd CONFERENCE DAY

9:00–11:00	Parallel sessions C	Rooms 1201, 1604, 1503, 1504, 1505, 1506
11:00–11:30	Coffee break	Dorotheenstrasse 24, 5 th floor
11:30–12:15	Keynote 3 Guilherme Gabriel Ballande Romanelli (BR)	Senatssaal
12:15–13:45	Lunch	Cafe „Cum Laude“
13:45–14:45	Keynote 4 Felicitas Macgilchrist (DE)	Senatssaal
14:45–16:45	Parallel sessions D	Rooms 1201, 1604, 1503, 1504, 1505, 1506
16:45–17:15	Coffee break	Dorotheenstrasse 24, 5 th floor
17:15–18:45	Roundtable/Discussion of joint research proposals	Room 1506

Sunday 13 September 3rd CONFERENCE DAY

9:00–10:30	Parallel sessions E	Rooms 1201, 1604, 1503, 1504, 1505, 1506
10:30–11:00	Coffee break	Dorotheenstrasse 24, 5 th floor
11:00–11:30	Conference Close	Senatssaal
11:30–12:00	IARTEM General Assembly	Senatssaal

THE TEXTBOOK'S IMPACT ON LEARNING:

An innovative future



Professor Bruce Allen Knight
Central Queensland University,
Australia

The textbook is a critical component of learning design used to reposition and facilitate learning across all sectors of education. In the context of a broader ecology of learning incorporating student learning processes and course development, Knight and Horsley (KNIGHT, 2013, 2015; KNIGHT & HORSLEY, 2011, 2013), have outlined a centrality of textbook typology relating to the degree to which teachers and students use textbooks in their courses. This typology is useful when exploring the future role of the textbook in blended learning spaces.

Despite the widespread growth in practice, there are concerns about the extent to which effective use is being made of technology to improve the learning experience of students (KIRKWOOD & PRICE, 2014). In this presentation I want to challenge your thoughts, practices and assumptions related to textbooks and digital learning resources by discussing flexible knowledge delivery systems.

BHASKAR'S THEORY OF PUBLISHING –

and what it could mean for the theorizing about educational media



Prof. Christoph Bläsi
Johannes-Gutenberg-Universität Mainz
Germany

In publishing, especially in publishing studies, the question, what the core of publishing is, has been the subject of a prolonged and controversial discussion. This discussion has gained noticeable additional momentum since the groundbreaking transitions in the wake of the digitization of media and media convergence, respectively. Michael Bhaskar, a publisher and – at the same time – publishing scholar, has made a considerable contribution to this discussion indeed, in the form of his 2012 book 'The Content Machine'. It is interesting to see, however, that certain specific current phenomena in the publishing sphere, not least in educational media, seem not to be seamlessly covered by it. My talk will present Bhaskar's theory, outline some of the phenomena mentioned and propose approaches to theorize about them, especially in the context of educational media.

THE NEW STATUS OF MUSIC IN BRAZILIAN SCHOOL SINCE 2012

and the role of music textbooks.



Prof. Guilherme Gabriel Ballande Romanelli
Federal University of Paraná – UFPR
Brazil

After four decades as a marginal subject in the Brazilian School curriculum, music became mandatory in all Basic Education since February 2012 (Brazil, 2008). This new status brought important debates on what should be chosen as Music Education subjects and how music lessons should be taught. In this scenario, music textbooks are assuming an important position as support for Musical Education teaching, especially among generalist teachers in pre-school and elementary school. Some researchers are systematizing a wide sample of music textbooks in order to reveal the main teaching conceptions (SOUZA et al., 2009), but there are still many challenges in studying Brazilian music textbooks. One main concern is to define what could be considered as textbook (CHOPPIN, 2004), since music teaching tradition often rely mainly on music scores as textbooks. Other aspects may reveal that although many advances influenced Brazilian music education in recent years (MATEIRO & ILARI, 2012) many actual textbooks continue to bring the same tradition and didactic orientation that was found in 1940s music manuals. It is possible to assert that many analyzed material expose a conception of music education mainly aligned with a Eurocentric and privileged cultural classes conceptions. This idea brings the music textbook as instruments that promote social inequality inside school, eventually contributing to maintain certain social status (BOURDIEU & PASSERON, 1992). Beyond the assumption that textbooks represent the selective tradition of school (FORQUIN, 1993), the study of Brazilian music textbooks reveals an important panorama of a country that is rebuilding its own conceptions of music education with the challenges of proposing nationwide textbooks and, in the same time, respecting the multicultural particularities of the Brazilian culture.

FROM TEXTS TO PRACTICES:

Conflicting paradigms in research on educational media use



Dr. Felicitas Macgilchrist
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for International Textbook Research,
Braunschweig
Germany

What are people actually doing with textbooks and other educational media in schools? For decades now, there have been calls for textbook studies to investigate how textbooks are actually used in classrooms. A similar lacuna pertains to educational media research more generally: We know a good deal about the ideologies, discourse and factual (in) accuracies of educational media texts, but we have been able to say very little about how they are taken up by teachers and students in educational contexts. Recently however, a body of research into the use of media in schools has begun to emerge. In this talk, I will draw on concepts from media studies and media anthropology to map this emerging field, suggesting that analyses can be roughly categorized as ‘media effects’, ‘media usage’, and ‘media as practice’. Each approach comes with its own epistemological, methodological and political assumptions. Each opens up ways of understanding media uptake, and each also closes down alternative understandings. After sketching the contours of this field, I will make a case for adopting a practice theory approach. This kind of approach seems particularly well suited to exploring the complexity and ‘messiness’ of media uptake in today’s schools, especially given the thoroughly media-tized world in which many young people are growing up today.

● CONTENT

Chair: Eric Bruillard

Room: 1201

Global economic contexts in business administration textbooks

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The presentation is based on a project that investigates what kind of knowledge is found in business administration textbooks when global economic contexts are directly or indirectly thematized. Thus the central focus is on the nature of the knowledge which is offered by textbooks in the context of vocational teaching and learning processes. In the framework of a discourse theory perspective based on the work of Michel Foucault, all the textbooks approved for use in Austrian higher schools for commerce (*Handelsakademien*) for the subject of Business Administration were analysed. The method used was influenced by the work of DIAZ-BONE (c.f. 2006) and KELLER (2012).

The first step was to carry out a rough analysis of all 15 books in order to identify all the passages relevant to the research question. In a detailed analysis (second step) a heuristic set of questions was applied to the highlighted passages. The results from the passages questioned were paraphrased, i.e. condensed into a core statement and examined with regard to relationships and reciprocal effects in order to sketch the basic logic of global economic contexts offered in the books.

The analysis shows that when the corpus as a whole is examined, certain patterns emerge, delineating a roughly similar picture of the globalized world order; it seemed appropriate to paraphrase the logic of this pattern into an inside and a two-part outside (catching up, threatening outside and outer periphery). In keeping with this logic of division, according to the textual material, certain circumstances and strategies appear to be logically imperative, offering no alternative. The inside perspective serves as the dominant reference point, as the standard for comparison, and as an absolute benchmark for evaluation. There is a unidirectional flow of knowledge, transporting progress and development from the inside to the outside.

The presentation ends by outlining didactic points of escape as possible ways of bringing about interruptions.

Can Positive Discourse Analysis (PDA) contribute to a methodology for analysis of representations of ‘the global other’ in textbooks?

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In this paper I will discuss if and in what ways Positive Discourse Analysis (PDA) can contribute to a methodology for analyzing representations of ‘the global other’ in textbooks. PDA is a concept introduced by Jim Martin and Rose (2003) and James Martin (MARTIN, 2004) on the basis of postcolonial theory and discussed and further developed by Felicitas Macgilchrist (MACGILCHRIST, 2007). PDA suggests contesting dominant discourses by reframing the issues at hand. It also suggests studying discourses that ‘work’ in the sense of making readers or viewers pity ‘the global other’ so that it can lead to both compassion and action. Reframing the issues at hand can be done by establishing counterdiscourses in various ways, e.g. through multimodality, narratives, humour, metaphors and irony. In my presentation I will show how these strategies are used in Scandinavian educational material in history and geography in representations of ‘the global other’, in Norway, Sweden and Sapmi. For discussion of the usefulness of PDA I will draw on research on globalization in literature (ANDERSEN, 2014), on CHOULIARAKI & FAIRCLOUGH’S (1999) ideas of discourse in late modernity, in addition to Chouliaraki’s reflections on post-humanitarian communicative styles (CHOULIARAKI, 2008, 2012).

● CONTENT

Chair: Eric Bruillard

Room: 1201

A textbook analysis using the praxeological reference model in the case of geometry proportion

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Recently, research on textbooks has been attracting more and more researchers. However, this research area seems to still be in need of a stabilized theoretical framework. The purpose of this study is to present a specific use in this area of the Anthropology Theory of Didactics (ATD) by CHEVALLARD (1999). The ATD explains mathematical activity in terms of mathematical praxeologies. Using this tool, we investigate the proportion theme in the geometry domain, as it appears in three widely used Indonesian lower secondary school textbooks, focusing on the mathematical activity related to this theme which the books seek to induce among students. The result shows that there are tasks that appear dominantly in the three textbooks. In addition, the use of an explicit, precise reference model leads to an analysis which is reproducible in the sense that any researcher using this model would arrive at approximately the same analysis which, moreover, exhibits crucial characteristics of how the theme is treated in a given text.

Introducing index lists as a tool for identifying typical linguistic features of specialized registers, with examples from Swedish textbooks in natural sciences

Judy Ribeck,

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Both Nordic and international studies have indicated that subject-specific linguistic distinctions rarely are made explicit to students (CHANDLER, 1995; DYSTHE et al., 2006). To be able to offer students adequate support, we need to be more knowledgeable of specific linguistic demands at different form levels. This calls for large-scale subject-specific empirical language studies.

My work describes a quantitative procedure for characterizing the register of Swedish textbooks in natural sciences, i.e. from the subject fields of biology, chemistry and physics. The method is corpus-based and uses tools from language technology to automatically produce, what I call, index lists, i.e. lists of salient features of specialized language. The idea of such lists originates from the project to develop an academic word list for Swedish (RIBECK et al., 2014). This method, which originally focused purely on lexical items, i.e. words, has been adjusted in order to also extract variables on the phraseological and syntactic levels of language.

In my presentation I will show examples of index lists over vocabulary, nominal phrases and syntactic structures, extracted from a corpus of 5 million words originating from Swedish secondary and upper secondary textbooks in natural science.

▲ COMMUNITY RESOURCES & LIBRARIES

Chair: Jesús Rodríguez Rodríguez

Room: 1604

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CRL1

Praise of place: Industrial heritage sites as educational rhetoric

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In many cities, places are transformed from industrial use to new urban areas, ateliers, parks etc. Some of the places become heritage sites for the conservation and communication of local or even national industrial history. The rhetoric telling about and representing the place in verbal texts and pictures becomes formative for the collective memory. The communication is rhetorical, but not in the deliberative or forensic way, but as epideictic rhetoric. Epideictic rhetoric praises the place for its unique qualities. Yet, it also shows an educative function communicating these values and memories to school classes as well as children and adults visiting. The greatness of local enterprise, working class culture, and the everyday lives of the ancestors is communicated. Furthermore, the epideictic rhetoric of place expresses fundamental formative norms of identity and belonging. Examples of these educative and formative functions of the praise of place are drawn from the transformed industrial sites Hammerdalen in Norway and New Lanark in Scotland.

The history of textbook in the Library Fund of INDIRE

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INDIRE

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This article intends to present the Library Fund of INDIRE (National Institute for Educational Documentation, Innovation and Research), Italy. The Fund is a very rich collection of textbooks of different age, from the seventeenth to the twenty-first century. It represents an important opportunity to reconstruct the history of the textbook, in such a crucial moment coincident with the transition to digital books. The volumes of the Fund deal with various topics. Some of them (dating back to 1600 and to 1700) are about the education of the prince or of the aristocratic classes, while the volumes of the seventh century are about popular education, the first sign of interest for the social function of education. There are grammars, popular science books, geometry or algebra compendia, anthologies of selected texts dedicated to the sentimental training of young generations, of their sensitivity or their citizenship. There are also schedules, illustrated texts, dictionaries, tools for improving knowledge. The 'Classics' complete the series. The Library Fund is a repertoire that allows to study some fundamental topics, very important especially now that the textbook is living the transition from paper to digital and is difficult to understand the real future of new textbooks. The first point on which we would like to focus our attention concerns the importance of the selection of content and the correspondence between the proposed issues and the students' experience. Second: the attention to the typographic aspects of the texts, functional for learning, for fast retrieval of information and for the establishment of the concepts. Third, the use of the illustrations as a replacement of the experience, but also as an element to 'lighten' the practice of study. Our idea is that we have to learn so much from the example of the past, even if we have to change something.

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▲ COMMUNITY RESOURCES & LIBRARIES

Chair: Jesús Rodríguez Rodríguez

Room: 1604

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CRL1

The use of the community resources for early inclusion children in the school and society

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The use of natural and social environmental resources in early childhood education, whether they be strictly educational or not, constitutes an opportunity for working from a perspective of greater inclusiveness for students in the classroom and the community in general. This paper presents some conclusions from a study being carried out in preschools aiming to analyse the extent to which using resources from the local community contributes to student inclusion in their environment, while building awareness of realities other than their own. Here we present materials, how they are used and the aims sought.

The research was carried out using qualitative methods based on observation, documentary analysis (particularly videos produced by teachers and students in rural schools who recorded activities and posted them on their own blogs) and didactic resources.

The main conclusions include the motivation and involvement of all the students in the development of the educational experience. This promotes the use by students of different resources requiring different skills which are basic characteristics of an inclusive proposal.

Description of the actions by municipalities in the process of elaborating their educational media

Carmen Denébola Álvarez Seoane,

Jesús Rodríguez Rodríguez,

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The role of city councils in education and the presence of local culture in educational media have generated interest in the study of resources. The relevance for educational research is based on the following:

- 1) there is a gap in scientific knowledge, seeing as educational technology and textbooks have been the object of more research, however, local culture is getting more attention;
- 2) there has been a social change over the last two decades with municipalities becoming more involved in education and the production of learning materials;
- 3) researchers with experience in action have collaborated with de Galician city councils in the design of educational media.

We have aimed to identify and describe education policy-making processes and formal aspects of print and digital educational media produced with support from local governments. At the 12th IARTEM Conference, we presented the our first-phase research results based on documentation regarding more than 700 resources. An extended version of the paper was published in *Orbis scholae* (Vol 8/2/2014). In this paper, we will present the research results from the second phase involving a questionnaire methodology with a sample of 84. Municipal education programs are described in relation to the production of learning materials to identify funding sources and to describe the overall process including design, development, publication and dissemination of educational resources produced by them.

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■ USE OF EDUCATIONAL MEDIA

Chair: Péter Bagoly-Simó

Room: 1503

Literacy in Norwegian schools – Our experience from secondary and upper secondary school

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From 2006 to 2013 we have conducted two major research projects on literacy-related themes at our institution, both financed by the Research Council of Norway. The first project had the title 'The Reading of Expository Texts in the Different School Subjects' (2006–2010) and the second was called 'Learning Resources and Writing in Educational Textual Cultures' (2010–2013).

Because our institution has a special interest in the role of learning resources and regards them as crucial for learning, these resources formed the motivation for both projects. In the Reading-project we found that the students often were left alone in the reading process. Interviews with students in pairs revealed that they were rather unconscious of the importance of headings, key words and other aids embedded in the textbooks or on the accompanying web pages. In short, they were not acquainted with the use of reading and learning strategies. In the Writing-project some of the results are connected to the vast differences in text cultures. Whereas physics as a school subject is characterized by short texts with a high number of subject-related words and expressions, formulas, columns, diagrams, graphs etc. the subject mother tongue is quite different. Mother tongue (Norwegian) encourages the students to be creative, take risks when writing whereas physics as a school subject has clear preferences for precision, exact answers and the most important genre is the physic report.

Our experiences and findings resulting from both projects have brought us to further investigations in literacy-related questions. Currently we work on a project concerning the depiction and presentation of indigenous people in Norwegian and Swedish textbooks, and the overall interest is to study what learning resources could offer as support for learning and in a wider perspective what societal role textbooks and other educational media play in the educational system.

In our presentation we will draw on examples from both research projects and highlight the findings connected to learning or lack of learning.

How to introduce new reading digital formats in primary school

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New technologies are changing the way we read, as a result today's students are required to be able to read different formats. Recent PISA research studied digital reading abilities. In our research we posed the question, how can new digital formats be introduced into schools alongside traditional textbooks? The present research rests upon an exploratory study in two classes, where an E-book on tablet was introduced for the very first time. Part of our aim was to address different issues that had arisen from a case study (STAKE, 1995; YIN, 2005), applied to a larger sample. The research project seeks to observe the introduction of interactive and illustrated E-books on tablets in ten classes with nine-year-old children. After three sessions dedicated to the familiarization with the digital device (SCHUGAR et al., 2013) we collected qualitative and quantitative data using different tools: participants' behavior observed during the reading of the selected E-book; a comprehension test after the reading session to assess the targets achieved by the children; a semi-structured questionnaire given to each child to evaluate how children experienced the new reading practice. Initial results show the importance of the familiarization process to train the children in using these devices. The second point regards the selection of the E-books for schools and the features needed to measure their quality (CAHILL & MCGILL-FRANZEN, 2013). Finally, the research highlighted the complexity of the new format, which offers many communication channels (such as audio narration, music, sound and screen interaction) and calls for the use of suitable reading strategies (SALMERÓN et al., 2005; AFFLERBACH & BYEONG-YOUNG CHO, 2008; SERAFINI, 2012; CARDULLO et al., 2012).

■ USE OF EDUCATIONAL MEDIA

Chair: Péter Bagoly-Simó

Room: 1503

Reading in early grades textbooks in Morocco

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In 1999, Morocco launched a comprehensive reform of the education and training system. The reform succeeded in extending access to primary education for most school age children in Morocco, with enrollment rates exceeding 95% and success rates almost reaching 85% in 2011. However, the dropout rate remained high, with an estimated 107,000 children leaving school before completing compulsory education each year. Several studies reveal that poor reading skills among second and third graders can be a result of a combination of complex factors. These are the same as the external and internal factors that contribute to low enrollment of school-age children and school dropout in Morocco (RTI, 2011, 2014; EL-KOGALI & KRAFFT, 2015; CERBELLE, 2012). Inadequate instruction in reading in early grade textbooks could be considered one among the more dominant factors behind attested high dropout rates and academic failure in Moroccan primary school. The language textbook, the main instructional means of the teacher and the only reading material for most of the children, tends to betray a distorted conception of reading literacy and deficient instructional strategies.

This paper presents the results of an analysis of early grade textbooks for teaching Arabic language in Morocco; the analysis reveals that the reading component in these textbooks is presented as a means to 'teaching Arabic language', rather than as a means to enabling the learners to acquire necessary grade level reading literacy skills. Moreover, it notes the absence of and at times a disorganized and unbalanced way of exposing the learners to the five components of reading literacy, namely, phonemic awareness, alphabetic principle, vocabulary, fluency and comprehension (NATIONAL READING PANEL, 2000).

The paper concludes that flawed reading instruction in early grades constitutes a hindrance to learning, not only the language, but also content in non-language courses and thus could be considered among the main causes for high rates of academic failure and school dropouts in Morocco.

Textbooks and the teaching and learning of Arabic Literacy

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This paper will present interpretations of what is understood by reading and writing in the early years (as well as 'literacy'), the reasons why early grade Arabic has come to be taught quite differently from Reading and Writing Literacy in some other countries, and why many children have a negative impression and a poor experience of learning Arabic in school.

I will argue for a transformation of the way that Arabic Reading and Writing Literacy is taught in early grades. I will focus particularly on the planning and writing of the course book or textbook, which plays a vital role in structuring teaching and learning in all Arab countries, especially in government schools. I will examine approaches to teaching Reading and Writing Literacy in other countries, including the debate over whole language/meaning-based approaches and decoding/phonics, and how such approaches may be framed and supported by the textbook. The textbook, and the overall approach to teaching Reading and Writing Literacy, will be set within the context of behaviourist and constructivist traditions. I will argue for the inclusion of particular features in textbooks and teacher's materials. I will also address the challenge of language register and the ways in which young Arabic-speaking learners acquire the academic or literary language that they will need in order to progress through school and enjoy their experience of reading. The paper will also refer to syllabus design and the ways in which syllabus is interpreted by textbook writers.

● CONTENT

Chair: Ommund C. Vareberg

Room: 1504

Websites for textbooks – companions or competitors?

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In Norwegian upper secondary school, practically all students have their own laptop or tablet computer for classroom use. Therefore most textbooks are supplemented by companion websites. Such cross media learning material systems are not coherent texts, but text complexes or resource collections where editorial staff organise and arrange contributions from several different specialists in a common framework.

Readers of 'linear' texts are led through the text and engage primarily in interpretation, whereas readers of multimodal texts have to create the reading path themselves and commit to design activity while actualising the semiotic resources in the text (KRESS, 2003). This observation is also true for the users of textbooks with companion websites where the non-linear structuring of the pedagogical resources makes it necessary for users to actively engage in creating convenient learning sequences.

My presentation will focus on cross media learning materials for the subject Norwegian in (first grade of) upper secondary school (eleventh grade), and investigate how they help learners create coherence between the resources in the different media.

A common learning sequence in textbooks is a theory section followed by an activity section with repetition questions and other exercises related to the theory. My investigation suggests that the textbook does not necessarily play an important role as a knowledge resource or sequential resource (LINELL & MARKOVÁ, 1993) in the process of actualising the meaning potential of the web exercises.

Instead of linking up with the content in the corresponding section in the book, several web exercises establish an epistemic room independently of the book, and thus contribute to creating a less strict sequencing of the learning material. This moving away from the learning resources in the textbook might lead to trivialization of the meaning and learning potential of the system as a whole.

A multimodal invitation

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This paper directs attention to BRUS (2006), a literature textbook for secondary school, which is an unusual example of a multimodal paper-based pedagogical artifact in a monomodal textual tradition. Particularly interesting are BRUS paratexts. GENETTE (1997) defines paratexts as 'a 'vestibule' that offers the world at large the possibility of either stepping inside or turning back'. Thus this paper will analyze and discuss how BRUS paratexts – cover, contents and preface – combines a range of visual and written modes to mediate a literary content and the didactic implications.

The analysis is based on KRESS & van LEEUWEN'S (2006) multimodal theories. I will begin by focusing on BRUS materiality as a particularly important semiotic resource in this context. The analysis also examines how BRUS utilizes visual and speech acts that interact with the reader, and the representations of visual and textual processes. The last part of the multimodal analysis treats the meaning of the composition and how the visual and written elements are structured, e.g. colors and cultural symbols.

The result indicates that BRUS materiality permits visual resources and compositional structures, which differ from the traditional textual discourse in literary textbooks. The visual and textual representations of the paratexts are strongly dialogical and focus on the world of fashion and individuality. The purpose is presumably to engage the students by introducing the literature through a postmodern discourse in which high culture and low culture are mixed. The problem is the lack of a critical filter and pedagogical meta-discussions in which BRUS discusses what functions the study of literature might fill in the era of multimodality. Hal Foster writes about how a resistant postmodernism seeks to question and explore rather than exploit cultural codes (FOSTER, 2002). In my opinion, such critical perspectives should be in focus in a postmodern and multimodal textbook.

● CONTENT

Chair: Ommund C. Vareberg

Room: 1504

Nicaraguan picture books as learning material

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In this paper, we want to present and analyse a Nicaraguan picture book for children, *La Llorona* (The Whipping Lady). The picture book builds on a Central American myth where indigenous people encounter colonialists. Our theoretical framework is social semiotics (HALLIDAY, 1978; van LEEUWEN, 2005), and NIKOLAJEVA & SCOTT'S (2008) work on children's picture books. In the understanding of myths as a genre, we are inspired of Roland Barthes (1999). We will discuss values and attitudes connected to the represented characters, and we will show visual representations of the characters presented in The museum of Myths and Legends in León, Nicaragua, and relate them to the picture book. In our discussion, we will emphasise the potential of such a picture book in kindergartens and schools in Nicaragua where there generally is a huge lack of learning material.

Our method consists of tools from multimodal text analysis and visual grammar (KRESS & van LEEUWEN, 2006; KRESS, 2010; van LEEUWEN, 2011). We analyse the interplay between text and image, lexicogrammatical choices, and representation, interaction and composition in images. Preliminary results of our analysis show that all modes of meaning underline the contrast between the colonialists and the indigenous people presenting the brutal attitudes of the colonialists. However, the picture book story also points at general values in all kinds of societies. The book has therefore a great potential for classroom work about historical experiences in Central America and ethical issues in general.

A social-semiotic visual analysis of Albania's communist and post-communist national history textbook covers

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The article examines Albania's national history textbooks' front covers during the second half of the twentieth century. Considered as conveyors of meaning they have the symbolic weight to communicate through a mere glance the prevailing political ideologies, while supporting the agitprop objectives of education. Covers are conceived of as a double-spread pages that constitute a semiotic unit and are approached from a social semiotic perspective (KRESS & van LEEUWEN, 1996; KRESS, 2003). Namely, the meanings included within their framework are not arbitrarily chosen, but on the contrary, they are motivated by the interests of the maker and the socio-historical context.

These messages, articulated primarily in a visual mode, make as well use of distinct resources, including writing, color, and gesture. Without neglecting the multimodal nature of the front layouts the study concentrates particularly on their visual counterparts. Through the analysis of the representational, interactive and compositional functions, it is attempted the uncovering of the ideological structures that lay behind the communicational ensembles. Simultaneously, the analysis allows the assessment of the evolution of the layouts' format, structure and design.

By staging a drama, at the core of which stands the narrative of the Albanian nation towards the Promised Land of Communism, the front covers focus on the most important moments of this long and pernicious wandering through the millennia. In this sense, the narrative rests mythical (BOTTICI, 2009) and at the same time becomes the key concept of ideology. The covers make the very first call for the imaginary social cohesion (LACLAU, 1990), prior this intensifies within the textbooks' pages. An additional observation refers to their evolution from the plain and black and white representations, during the first decades, to the vivid and colorful visual compositions at the beginning of the 1970's. Except for the format, the thematic of the representations changes as well. The depiction of the national heroes and symbols of the past shifts to the portrayal of the glory days of the Communist present. The achievements and the new idols are exalted next to the vision of the Socialist future. On the whole, the layouts seem to visualize by means of repetition the slogans of the Communist Party, which are objected to alterations or further elaboration in the course of the years.

◆ HIGHER EDUCATION & TEACHER TRAINING

Chair: Tânia Maria F. Braga Garcia

Room: 1505

Learning resources and MOOCs – What is being constructed and why?

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MOOCs (Massive Open Online Courses) have become a serious player within the field of education and learning in the past few years. MOOC research is thus a new field, but within the last 2–3 years, it has developed rapidly (LIYANAGUNAWARDENA et al., 2013, BAYNE & ROSS, 2014). Much of this research has had an emphasis on learners and outcome as well as suitable business models. And even though the internet merely flows over with lists of MOOCs to attend (such as the list from ‘Top 5 onlinecolleges’ which features a list of 99 MOOC environments) not much emphasis has been brought on the actual construction of learning resources within all these MOOCs – and what demands they lay on teachers competences and teachers skills.

Furthermore, pedagogical and didactical discussions about MOOCs often tend to adapt a more technical approach about a certain MOOC platform and its affordances and constraints (KNOX, 2013) rather than focusing on content, production and learning. In 2015, there is only a limited amount of research dedicated to a focus on what happens when academic staff finds themselves in the situation of reorienting themselves to become MOOC educators. (MOOC-UTVALGET, 2013).

The empirics in the study stem from observations in workshops of 17 MOOC educators’ collaboration and negotiations on how to construct their subject in a MOOC milieu. These discussions were audio recorded transcribed coded and analyzed and followed up by interviews with three educators. This paper addresses the problems occurring when teachers become producers of MOOC content and focus on the questions: What characterizes learning resources being produced and what are the educator’s intentions with these learning resources?

‘Textbook pedagogy’ will enhance the relevance of teacher education

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Criticism and discontent with the education offered to student teachers by Teacher Education Institutions in South Africa is regularly surfacing in the popular press and in research reports. Of particular concern is the quality and relevance of teacher education programmes and the inability of Teacher Education Institutions to address the many serious challenges the country’s education faces. Of equal concern is the inability of the education system to address the prevailing and unacceptable literacy and numeracy levels of learners within the system, as indicated by the international comparative TIMMS and PIRLS benchmark tests. This paper reports on a research-based design study to develop the ‘textbook competence’ (refer below) of educators as an enabling input in the delivery of quality basic education in schools in South Africa. A conceptual framework for understanding education quality formulated by UNESCO (2005) served as contextual backdrop for this study.

A design-based research approach was adopted to develop a particular workshop intervention. Three ‘themes’ were explored during the workshops, namely: recognizing the role and importance of quality textbooks as an input component in delivering quality education; the competence of teachers to evaluate the quality of textbooks in terms of 21 identified (defined) quality characteristics; and, the competence of teachers to use textbooks effectively, both as a resource and as a tool, to effect quality teaching and learning. These themes encapsulate the concept ‘textbook competence’ and would be included in ‘textbook pedagogy’ as a field of study.

The workshop intervention was presented to groups of student teachers and groups of practicing teachers. Feedback from participants indicated a clear need for educators to develop their textbook competence as a means to enhance their teaching effectiveness. From the workshop participants came to realise that ‘textbook pedagogy’ as a field of study would greatly enhance the relevance of teacher education and therefore recommended that it be included in the curriculum of teacher education programmes.

■ USE OF EDUCATIONAL MEDIA

Chair: Zuzana Sikorová
Room: 1506

The influence of adaptive digital learning systems on learning

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There is an on going emphasis on developing adaptive digital learning systems. But how adaptive are these systems really and what is their influence on learning? From theory we discovered that we lack knowledge of the effects of adaptive learning systems. This is why we explored how pupils use adaptive characteristics and possibilities of digital programs and if these characteristics and possibilities support pupils in successfully finishing their tasks.

Therefore we investigated the influence of feedback given by the digital program. We also looked at the influence of possibilities for reflection and at the influence of different forms of control on the learning process of pupils. Finally we investigated if and wherein learning processes of prosperous and not prosperous learners differed.

We analysed four programs on the following elements: possibilities for feedback, possibilities for reflection and kind of control (learner, program or shared control). We also observed and made videos of pupils, doing their learning task and we described patterns of their navigation actions. Pupils had to think aloud; this was recorded as well. From these we analysed if and how pupils used the possibilities of feedback, reflection and the kind of control. Besides we interviewed pupils and teachers about their opinion on the possibilities of the program and what they thought about the influence on the learning process.

At the end we looked at the difference between pupils that were prosperous and pupils that were not prosperous in relation to their patterns of navigation.

The conclusion of our research is that the kind of control of the program influences the learning process of pupils. We could not conclude an effect on reflection or feedback, mainly because of the lacking of adequate forms of both.

Digital learning materials and patterns of teaching

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With inspiration from Computer-Supported Collaborative Learning (KOSCHMANN, 1996) and Classroom Studies on patterns of teaching (GIVVIN et al., 1999, WEGERIF, 2004) this paper presents a study on relations between digital learning materials which have a didactic design and built-in goals, content, and methods on the one hand, and use of digital learning materials as part of an integrated teaching pattern on the other.

Such a focus draws attention to the relationship between potential and actualization, intentional and realized impacts. Thus the research question is, in which way it is possible to map correlations between didactic designs of learning materials and types of teaching practices?

This focus opens a large, important area within learning material research, with great research potential. Therefore the authors of this paper, together with a large research team, has developed new methodological approaches to this area where we tighten requirements for explication and validation for our data collection tools. This is done in connection with actual focus on school experiments in Denmark. Thus we use both score guides and double scoring of digital learning materials, scoring of pupil products, structured observations of several hundred lessons, and subsequent scoring of teaching patterns together with competence testing of pupils in conjunction with questionnaires and qualitative interviews in relation to several types of respondents: managers, supervisors, teachers and pupils.

The result is extensive empirical data with a plurality of parallel primary analyses, however, this is necessary. It requires mixed methods, integration of data sets and interdisciplinary secondary analysis, based on primary analyses if we are to have any hope of reaching a deeper and more comprehensive understanding of the relationship between intentional and actualised teaching patterns. This paper presents selected results on the relation between digital learning materials and patterns of teaching.

■ USE OF EDUCATIONAL MEDIA

Chair: Tânia Maria F. Braga Garcia

Room: 1506

Developing a methodology to analyse the role that teaching and learning materials play in student learning and achievement

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Identification of critical factors purporting to explain student achievement and learning are currently dominated by notions of teacher and teaching quality as the critical factor (HATTIE, 2009). A range of factors and educational interventions have been analysed and assessed in promoting student learning. However, teaching and learning resources and their role in affording and promoting student achievement have never been seriously evaluated as a factor in student learning. In part, this neglect of acknowledging the role of teaching and learning resources in student learning, is because such resources are mediated by teachers in use – for example, print resources and digital textbooks and other teaching and learning resources are modified, adapted, and customised by teachers in their design of learning strategies and classroom learning environments.

This paper will present a theoretical framework for considering how classroom teaching and learning materials impact and afford student achievement and learning. Then the model will be utilized to show the impact of different types of teaching and learning resources on student achievement and learning, as measured by TIMSS data sets 2003–2011.

The paper will attempt to answer questions focused on analysing the relationships between the types of classroom teaching and resources and student achievement, such as: Do the students' achievements differ if their teachers use different kinds of teaching and learning resources as a basis for instruction? Do the students' achievements differ if their teachers use teaching and learning resources in different ways, i.e. as a basis for instruction or as a supplement or do not use? And if your national education system uses more textbooks/workbooks/software, do your children achieve more in TIMSS? This paper presents a method for considering the role of teaching and learning materials in student learning and seeks to redefine the concept of teacher and teaching quality.

Better understanding the way teachers select, modify and exchange educational resources. Overview of ReVEA project

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A central task for teachers is to design, search, select, edit, reconstruct the resources they provide to their students in order to support their activities, but also share or pool with their colleagues. Teachers build up a system of resources that they constantly modify, adding new resources, modifying older ones and deleting some of them (especially if they are no longer compatible with the curriculum or the infrastructure of the school where they work). Teachers' work on resources, their selection and transformations, which are characteristic of their pedagogical freedom, but is sometimes not acknowledged by educational institutions, is essential for the quality of teaching; its analysis represents a major issue for the understanding of the educational system and its evolution. It is at the heart of the ReVEA project: living resources for teaching and learning.

This project will focus on the design, selection and usage of resources in secondary education. Four subject matters will be considered, because of their contrasted characteristics (specific culture, use of authentic documents or documents developed by teachers, of general or specific software, etc.): mathematics, sciences, English, engineering.

The first objective is to collect new information on the documents and resources used by teachers and to design a panel of indicators that will be used in a future national observatory. To do so we will rely on information that is currently not public, obtained by data mining in anonymous databases: those of the French Centre for the Management of Copyright (CFC) and of the national syndicate of publishers. In addition, we will also collect data about the resources teachers download from institutional sites (both national and regional) or from professional platforms. Finally, we will also complete these data by using, if possible, statistics produced by educational local authorities. In relation with this first objective, we will establish a cartography of resource exchanges for the selected subject matters. A second objective is to document and provide a critical analysis of the current evolutions and to identify the importance of different factors, both at a macro level (the implementation of competence-based approaches, the integration of new knowledge, economic changes, growing need for individualisation and interactivity, etc.) and at an individual level (gender, school context, expertise in the subject matter, number of years of service in the school, use of technologies, adaptation to students with special needs, etc.). Longitudinal work will also be carried out in order to elucidate underlying processes. To do so we will follow a sample group of teachers (individually and in their school) using the methodology developed by GEUDET & TROUCHE (2008) to understand the structure of the systems of resources used by teachers. Furthermore, two types of investigation will also be led: 1) an analysis of the exchanges that occur between teachers within official and non-official teacher communities, and 2) the trajectory of resource usage (life cycle, indexation, tagging, discussions, etc.). With a duration of 48 months, this project will allow us to characterize the evolutions of resource usage and to model resource life cycle in education. It will lead to recommendations, in particular regarding teacher education and propositions of standards relative to the appropriation of educational resources by teachers.

● CONTENT

Chair: Jim McCall

Room: 1201

Textbooks and images of Empire

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From around the beginning of the twentieth century publishers have responded to notions of empire. This response has been at several levels. First, the empire – the British Empire in particular, though not exclusively – represented both a market for publishers' goods and a subject about which it was possible to publish endlessly. But do truly independent countries need a textbook publishing industry to call their own? Is a publishing industry a condition of nationhood? The presentation will consider how textbooks in Britain have dealt with questions of Empire and how ideas of Empire have shaped their content and approach over the years.

Embedding concepts of Peace, Sustainable Development and Global Citizenship in school textbooks

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Education for Peace, Sustainable Development and Global Citizenship (EPSG) have been at the fringes of regular curricula, obtaining a bare minimum mention in some textbooks of mainstream subjects of Science and Maths. Our Institute is currently doing research at embedding concepts of EPSG in textbooks of mainstream subjects like Maths, Science, Socials Science and Languages. It's a pity that still simple arithmetic problems like $234 - 36 =$, are given in a mathematical form or trivial form rather than simply put them in a word problem promoting sustainable development. For example: Masaimara sanctuary had 234 species of birds in 2003 and lost 36 in ten years. How many species of birds are left now? While there have been policy level documents to push for integrating ESD in mainstream curricula, but little has happened on the ground. UNESCO's Decade of Education for Sustainable Development (DESD) emphasised integration and embedding. However, even UNESCO's guidebook on textbook research and the ESD Source Book both do not put forth any conceptual framework to embed EPSG in curricula. The Cross Curricular Framework for Global Development Education in the context of Education for Sustainable Development published by the German Government is perhaps the only serious effort at creating a guide. It is a very comprehensive curricular framework to integrate Global Development education in school curricula. However, it is weak in empowering individual curriculum developers in creating textbooks. It is mainly a guideline rather than a guidebook. The paper presents analysis of efforts at impacting textbooks on EPSG worldwide including UNESCO, German Government, Indian Government, private groups and others, and makes a case for the academic community to come together and create a conceptual framework or guidebook to help curriculum developers around the world.

● CONTENT

Chair: Jim McCall
Room: 1201

Globalization as ongoing colonialism? Finnish school textbook descriptions of decolonization, global economy and tourism

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Some scholars have portrayed globalization as the extension of colonialism. This presentation investigates how the global world is portrayed in Finnish school textbooks in social science, geography and history for grades 5–9, focusing on the perspective of ‘us’ Westerners and ‘them’, the rest of the world. The core values of the curriculum state that all basic education should be based on a number of values, such as equality, democracy and human rights. The analysis looks at how well these values are reflected in the textbooks, from a postcolonial perspective. The method relies on discourse theory analysis developed by LACLAU & MOUFFE. To them, the concept of objectivity is seen as ideological: whatever is said, written or done help create an understanding of what is real. The textbook texts, pictures and assignments are here seen as such articulations. The presentation focuses especially on the portrayal of three concepts in the books: the decolonization process in the mid 20th century (history books), the descriptions of economic globalization, global trade and flows of capital (mostly social science books), and the description of tourist venues (mostly geography books).

The formation of a historical consciousness: Students’ ideas concerning the concept of African slavery in Brazil

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The reflections presented here are based on studies about the formation of a historical consciousness, such as the writings from RÜSEN (1997, 2001, 2007), MARTINS (2011), BARCA (2006), SCHMIDT (2002, 2006), SCHMIDT & GARCIA (2006) among others. According to RÜSEN (1997), the historical consciousness ‘can be described as the mental activity of the historical memory, which has its representation in an interpretation of the past experience conducted in a way to understand the current life conditions and to develop future perspectives in practical life according to the experience’. In this research, we try to identify how the formation of a historical consciousness by young students in relation to the substantive concept African slavery in Brazil is taking place. The qualitative research was developed in a public school from the city of Curitiba involving 7th grade students with ages ranging from 11 to 13 years-old. In this study we sought to identify some answers to the investigative questions that follow: While using the textbook, does the teacher use the narrative as presented in it?; How does the teacher work on the substantive concept of slavery?; What is the idea conveyed by the student regarding the substantive concept of slavery? We adopted the following procedures: an instrument to investigate the students’ previous knowledge regarding the concept of slavery; an instrument to investigate the idea of slavery after pedagogical intervention. For this purpose, after having contacted the teacher, we observed some history classes. Some considerations can be made, among them, the fact that, in general, the students have incorporated the elements from the textbook in their narratives in a more significant way, and the teacher’s explanation in a less significant way. We have noticed that most students expressed ideas that indicate a traditional historical consciousness.

■ USE OF EDUCATIONAL MEDIA

Chair: Eric Bruillard

Room: 1604

Cypriot physics teachers' use of physics textbooks in teaching

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This paper aims at:

- exploring the extent to and the ways in which physics textbooks are used by Cypriot secondary teachers during teaching classes and
- investigating potential correlations of textbooks' use with factors related to teachers' pedagogical views concerning teaching and learning (constructivist or traditionalist) as well as to other critical personal (gender and age) and professional characteristics (years of teaching experience, level of education, type of school). It must be noted that the Cypriot educational system is highly centralized and Cyprus is one of the few countries around the world where the system of a unique state approved textbook for mandatory use persists. For the accomplishment of the research objectives, a questionnaire was distributed to a sample of 120 Cypriot physics teachers corresponding to about 30% of the total population. The analysis of the corresponding data showed that in general Cypriot physics teachers conduct their everyday teaching independently from the textbook. With regards to the ways the textbook is actually used, it was found that Cypriot teachers use it as a source of test items for students' assessment, as a reference material for study at home or as a source of examples and visual material for demonstrations during physics classes. Moreover, as far as the ways teachers use the textbooks are concerned, it was found that among all the investigated factors, the ones that seem to play the most important role are: their pedagogical views, the years of their teaching experience as well their level of education. Specifically, teachers holding more traditional pedagogical views, less teaching experience and no postgraduate education tend to be more dependent upon the physics textbooks for planning and conducting their everyday teaching.

Actual educational media used by physics teachers in French high school

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In France despite the teachers 'pedagogical freedom', the subject contents are strongly framed by the national curriculum especially in high-school physics and chemistry. The recommended teaching methods are based on the implementation of scientific processes whose experimental approach is a major component. The textbooks are not intended to be prescriptive, but they give answers to other questions, untreated by the programs: examples of teaching situations, an order of progression. They also confirmed the trend expressed in the programs for a multiplication and complexity of the activity forms for students: experimental, documentary, historical approaches are sometimes combined among them. And above all they show a generalization of the method in which student activities precede theoretical parts of the lesson.

Under the frame of the REVEA project we postulate that the teacher is led to select, transform, or recompose classroom resources. In the exploratory phase, interviews were conducted with four physics and chemistry teachers in high schools around Paris. Classroom observations were conducted during mechanics centered lessons given by two teachers at grade 9 (15–16 years old students). The pedagogical resources used with students show a variety of media, some distance to the manual but a strong compliance with the curriculum.

Teacher profile, institutional and organizational contexts are described. The different resource elements (documents, real or virtual objects) provided to the student are analyzed. We question the place and the role of the materials encountered (real objects, films, animation, simulation). The documents distributed to students, guiding their activities, or 'activity sheets' are studied in terms of format, guide mode and type of activities.

■ USE OF EDUCATIONAL MEDIA

Chair: Eric Bruillard

Room: 1604

The utilization of science textbooks

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In Brazil the science teaching is guided by the contents of science textbooks. It was in consideration of the centrality of the school textbook in the process of teaching and learning of sciences and biology, of the paucity of studies concerning the use of this resource, in addition to the large investment made by the Brazilian Ministry of Education in favor of the analysis, purchase and distribution of this didactic tool, that we opted for this subject of study. The present study is centered on the context of the use of the school textbook in the process of teaching and learning of sciences. It aims at identifying and characterizing the pedagogical context in which the science textbook is used in view of recognizing and understanding the factors that determine the different styles of use. To this end, we observed science teaching in two classes of 5th year Primary and held interviews with teachers and students. The results put in evidence two predominant forms of use of the textbook in the classroom: oral reading accompanied by explanation on the part of the teacher in view of doing the exercises. In latter case, the students copy the exercises into the workbook in order to solve them. The analysis of the field diaries shows that the use of the textbook is associated to a traditional teaching model in which the central preoccupation is the learning of the material transmitted by the textbook. One observes little preoccupation with the processes of reading and interpretation of the texts.

Visual literacy and geography textbooks – Eye-tracking study

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Modern school geography is a subject that heavily relies on media. Notwithstanding the rise of other printed and digital media, textbooks are still a central part of geography lessons. But they, too, have changed. Contrary to their predecessors from the 1950s contemporary geography textbooks contain complex structures of visuals and texts. However, several studies revealed that students have some difficulties to interlink the complex image-text-relations.

This paper addresses the challenges of learning when using images, graphics and image-text combinations in geography textbooks. It also examines in which way the media-specific competence ‘visual literacy’ is relevant for teaching and learning with geography textbooks. The focus of the presentation concerns the question of how students link the image and text information of a geography textbook spread in order to attain understanding of the content or to complete a specific assignment. Interdisciplinary observation methods are applied to connect aspects of geography education and visual communication (communications theory, design) with aspects of text-image research.

There is a relationship between the visual perception and eye movement. Eye Tracking as a visual method of data collection and analysis was used to precisely monitor students’ eye movements while observing geography textbook spreads. For example was analysed in which chronological order and with which intensity the participant observed elements on a geography textbook spread and which areas were ignored.

In a random sampling the eye movements of 20 students (secondary school 15–17 years, university students) were recorded. The entities of the research were double-page spreads of current geography textbooks covering an identical topic and taken from five separate textbooks. A two stage test was developed. Each participant was given the task of first looking at the entire textbook spread in order to determine what exactly was being explained on the pages. At a second stage, the participant was asked to solve one of the tasks from the exercise section. Overall, each participant studied five different textbook spreads. Each participant was asked to complete five test tasks (one per test spread) by studying the page on the screen and in written form. After completing the eye tracking test each participant was asked to complete a questionnaire.

The eye tracking study revealed students difficulties processing information from complex image-text combinations. While solving the tasks, a marked focus on text elements could be observed. Photographs were often looked at rather superficially.

Based on the eye tracking documentation, the challenges facing learning with graphics and image-text combinations were elucidated and related to educational psychology insights.

■ USE OF EDUCATIONAL MEDIA

Chair: Jesús Rodríguez Rodríguez

Room: 1503

Monitor for educational materials 2013/2014

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The Netherlands Institute for Curriculum Development (SLO), publishes its Monitor for educational materials (BLOCKHUIS, SLUIJSMANS & TEN VOORDE, 2014) every two years. It's a study into educational materials, and their use, in Dutch primary, secondary and special education. This is the sixth Monitor. The outcome of the Monitor is based on a digital questionnaire presented to teachers and managers in primary, secondary and special education. The questionnaire comprised approximately 40 questions relating to the policy concerning: the use and purchase of educational materials, the increase in digital educational materials and the development and sharing of educational materials.

The response on the questionnaire is divided over various groups: teachers in primary (N=244) and secondary education (N = 933); managers in primary (N = 365) and secondary education (N = 163); teachers in special primary (N = 17) and special secondary education (N = 27); managers in special primary (N = 12) and special secondary education (N = 6). The most important results from the Monitor 13/14 relate to four aspects. Firstly, the Policy for educational materials, on which teachers and managers hold different views. Twenty-five percent of teachers have no idea whether there is an educational materials policy in operation at their school. And, increasingly, it is managers who determine which educational materials are bought.

Secondly, the Use of educational materials, in which the largest proportion of these materials continue to be linked to a teaching package. While primary school teachers complement their educational materials with extra assignments, secondary school teachers are less inclined to do so. Teachers would like advice on how to deploy extra assignments for both less gifted and more talented pupils.

Thirdly, when it comes to the Increase in digital educational materials, this remains limited. Most digital educational materials are linked to a teaching package. Managers are of the opinion that professionalising teachers in terms of their computer skills remains a matter that requires urgent attention.

And, finally, the development and sharing of education materials. Fewer teachers develop educational materials themselves than did so in the past. Managers believe that teachers use the school policy when developing educational materials, whereas, in fact, teachers do this only to a very limited extent.

Digital resources for students in Niger: an experiment

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Introducing one-to-one computing in schools of less developed countries has now a rather long history. One of the most documented experiments was led with XO computers (WARSHAUER & AMES, 2010). The emergence of tablets and smartphones has changed the landscape. While less powerful than computers, they offer interesting functionalities. The operation that we are going to analyze has been carried out for two successive years in Niger. Funded by a consortium of an international carrier (Orange), a French agency for cooperation (AFD), this pilot operation has been operated in partnership with a NGO (Aide et Action) and the Nigerian Ministry of Education. It has reached 150 students and 20 teachers in two junior high schools. One of the schools is located in Niamey and the other one in Soudouré, a semi-rural area. Solar-operated chargers have been provided: individually for those having no access to electrical power, and collectively for the Soudouré school. The tablets (120 USD each), were preloaded with a series of digital resources. Due to a lack of interest of commercial publishers, a priority has been given to open education resources. Special connectivity devices were provided to teachers in order to access the internet through the GSM network. Our main hypothesis was that the students would have an appropriation of the tablets involving uses linked with their studies and, more generally, to cultural activities. We also posited that families would also use the tablets. We used a mixed methodology based on semi-structured interviews and focus groups with students and teachers, an analysis of traces of activities and two questionnaires (pre and post). Both interviews conducted with students and the subsequent user analysis has confirmed interest in tablets. The majority of tablets have been personalized. Around 70 % of the students we interviewed said they used it every day for educational purposes, mainly outside of the classroom. More than 80% stated that they were 'utterly satisfied' with the tablets and their preinstalled resources. On the average 60% said they were willing to consider paying in the future for the equipment, with disparities according to the socio-economic status. Usage within the classroom was very variable according to the disciplines. The main reason seems to be linked with the involvement of teachers. After one year and a half, more than 15% of tablets were out of service. Some had been stolen or lost. Around two out of three tablets had their screen broken – but remained functional – some chargers happened to be deficient, while other tablets were locked due to passwords, which had been forgotten. Overall, this innovation has focused on a case where young people do not have easy access to key technologies. The delivered service is perhaps quite modest, but it may lead to unexpected developments. The tablet, used in order to read digital school resources, was particularly relevant for the less endowed students in terms of economic, cultural, and educational capital and for girls. For these students, the tablet could partially bridge the strong social disparities between urban and rural areas in a country where rural students benefit only from 20% of educational expenses – in contrast to 80% for those living in urban areas.

■ USE OF EDUCATIONAL MEDIA

Chair: Jesús Rodríguez Rodríguez

Room: 1503

Between textbook and internet: digital media as a challenge in the history classroom

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It has often been observed that pupils consider their history textbook to be accurate, objective, neutral and exhaustive. Since the internet offers access to an abundance of source material the use of digital media in the history classroom could make pupils look beyond the frame set by the textbook and find a multiperspective approach to history. History teachers have made the experience, however, that it is challenging to make use of this obvious advantage of digital media.

Drawing on findings of an explorative empirical study this paper argues that while the use of the internet makes pupils aware of the difficulties of collecting information it does not contribute easily to a sound understanding of historical methods and – consequentially – historical thinking. A focus group interview suggested that the parallel use of the textbook and the internet helped pupils to reflect how the textbook is constructed and how they assess information they find on the internet on a general level. In terms of historical methodology, however, researches on the internet did not foster a multiperspective approach per se. The fact that there are so many different sources, perspectives and voices out there on the internet did not have much impact on the narratives the pupils constructed. Moreover, as other studies have shown as well, source criticism as part of the historical method is a challenging task for pupils in itself. It seems to be even more complicated when sources of all types are embedded in digital media. History education in theory and practice should therefore ask how digital media could be used to improve the understanding of the discipline.

Digital student feedback and the differentiation of teaching

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Teacher feedback for student learning has been in focus for a while (e.g. HATTIE). Similar research on systematic ways of dealing with feedback from the students to the teacher is missing. The few existing studies mostly on higher education deal with teacher ratings and general quality improvement of the teaching by student surveys. In order to enhance inclusion and differentiated teaching in primary and lower secondary school a new, simple and digital tool (www.elevbaro.dk) has been developed in order to gather information about the students' level of dedication and challenge, feeling of well-being and need for help in close relation to the teaching and learning process. The paper presents results from a follow-up survey of 350 teachers on their evaluation strategies combined with insights from a qualitative analysis of the long term use of the feedback tool. The following questions will be discussed: Matters of the design of the tool; the didactical and pedagogical implications of different ways of using the tool; the teacher and the students' perspective, the enhancement of the students' metacognition, student feedback in the context of the general culture of evaluation and ethical issues in the light of the search for meta data.

● CONTENT

Chair: Thomas Illum Hansen
Room: 1504

The presence of internet in brazilian physics textbooks: an analysis under the light of the Cognitive Theory of Multimedia Learning

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This work has the primary purpose of analyzing online multimedia materials cited in the 1st year high school physics textbooks to be used in Brazilian public schools in 2015. The bid invitation of the 2015 National Textbook Program – PNLD 2015, characterizing the purchase of books for the High School in the triennium 2015–2017, describes a series of criteria for the classification or suppression to be observed by authors that intend to have books included in the program. Based in the Multimedia Learning Principles, proposed by MAYER (2009), the websites mentioned as study materials in each one of fourteen books were cataloged. From this list, only websites that refer to a specific multimedia and that present some kind of knowledge construction, were analyzed. General websites like repositories haven't been analyzed, as well as websites that only present specific data or news. Among the results, we can highlight that a significant portion of the websites are built on shapes and structures that are not suitable for the students learning needs in this stage of education, showing that the analysis criteria for multimedia materials of PNLD need to be revised. Concluding the research, we present suggestions for reviewing link ways and availability of additional websites in physics textbooks.

Geography textbooks as a tool to develop spatial thinking

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It is our intention to present some results of our research about the way geography textbooks (from 24 countries) are able to develop the spatial thinking in pupils. For that, we analysed 48 textbooks (from 24 countries, from basic and secondary education) that we collected in the library of Georg-Eckert-Institute and we analysed the practical activities that are present in these textbooks using the taxonomy of JO & BEDNARZ (2009) adapted by SCHOLZ, HUYNH, BRYSCHE & SCHOLZ (2014). We aim to present the results of this comparison showing examples of textbooks that are more able to develop the spatial thinking and examples of textbooks that develop it less. As a case study inside this research, and deeply connected with this idea of spatial thinking development, we analysed and compared the way that these textbooks approach the issue of GIS (Geographic Information Systems) because often the exercises using GIS are able to develop the spatial thinking of the pupils in a higher level specially if they ask the pupils to solve problems or evaluate/judge geographical phenomena. There are textbooks that make no reference to GIS; there are textbooks that make reference to GIS only in theoretical way (explaining what it is) and, finally, there are textbooks that not only explain theoretically what is GIS, but also propose to pupils practical activities using it. It is in these last textbooks (with practical activities with GIS) that the development of spatial thinking tends to be bigger. So, in our presentation we aim to make an theoretical explanation about this research, but also discuss with other colleagues from different countries these results and also this theoretical issue: the development of spatial thinking by textbooks. Moreover, because GIS is an education technology, this presentation is also a contribution for the issue of Media Education and the connection between digital media and textbooks giving a contribution for the developing of the issue of geomedial in education and, particularly, the issue of geomedial in Geography textbooks.

● CONTENT

Chair: Thomas Illum Hansen

Room: 1504

Competence-orientation in German geography lessons: is the textbook still state-of-the-art?

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Especially since ‘PISA-shock’ the term ‘competence’ comes increasingly to the fore. This is accompanied by the demand for more ‘output-orientation’, in which besides subject-specific knowledge and skills also domain-general competences are acquired and further developed (SCHOTT, GHANBARI, 2012).

For that, educational standards have been implemented at federal level in Germany (GERMAN GEOGRAPHICAL SOCIETY 2014), which define subject-specific competences. Furthermore, the majority of federal states have oriented their curricula to key competencies, as has Baden-Württemberg in its 2004 curricula (OELKERS, 2008; MINISTERIUM FÜR KULTUS, JUGEND UND SPORT DES LANDES BADEN-WÜRTTEMBERG).

The study deals with the question, how the concept ‘competence-orientation’ is implemented in every day school life. In order to get an answer the project ‘Criteria for competence-orientated lessons’ (AKT:KOM) focuses on the subjective concepts of ‘competence-orientation’. The targets are stakeholders participating in the implementation of competence-orientation in the Baden-Württemberg educational system.

Textbooks play the leading role, when it comes to implement new curricula (OELKERS, 2008). From the view of teachers, textbooks are held to be more important than curricula (OELKERS, 2008), and serve as individual curriculum of the teacher in every day school life (VOLLSTÄDT et al., 1999; WIATER, 2005). Therefore one part of the project focuses on how the concept ‘competence-orientation’ is implemented in geography textbooks for Gymnasium (a type of secondary school, classes 5–12, students aged 10–17, considered the ‘high stream’ in the traditional three-stream system) out of the view of teachers in school, the ministry and the seminars for teacher education in Baden-Württemberg.

Initially, the individual themes and hypotheses are generated based on qualitative expert interviews with individual stakeholders on different levels like ministries, seminars for teacher education and schools.

‘Reading’ school science textbooks through the PISA lens. What can we learn about students’ assessed competencies?

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The majority of contemporary science curricula internationally adopt among their objectives the development of specific competencies for a rational management of the globally available knowledge in everyday life. Likewise, these competencies constitute a core component in the assessment framework of scientific literacy of the OECD-led PISA international survey. Greece participates in PISA since its first implementation in 2000 and Greek students’ performance in regards to scientific literacy is systematically low – significantly lower than the average performance in other OECD member states – in all cycles of the survey.

This study aims at investigating and comparing the competencies assessed by the PISA survey and school science textbooks used in lower secondary education in Greece. Furthermore, the role of visual images in assessing different competencies (i.e. explain phenomena scientifically, design and evaluate a scientific enquiry using scientific evidence) is explored. School textbook assessment tasks are representative of the school assessment framework since textbooks largely determine students’ strategies of studying, as well as teachers’ teaching practices, especially in the Greek educational system, which is particularly centralized with a unique textbook prescribed for mandatory use by the Ministry of Education for all school types. For the purposes of the study 282 PISA scientific literacy assessment tasks and 947 assessment tasks from Greek science textbooks (i.e. physics, chemistry, and biology textbooks) were analyzed. To analyze these assessment tasks, an instrument based on the systemic networks technique was developed, integrating different competency categories. Content analysis was applied to assessment tasks in order to classify them in competency categories. Moreover, the role of visual images was explored by means of their frequency of inclusion in assessment tasks, as well as their contribution to answering an assessment question.

Results of the analysis indicate significant differences between the PISA and the school textbook assessment tasks in the competencies assessed, as well as in the role visual images play in this assessment. Moreover, the results suggest that the Greek science textbooks fail in supporting students to functionally use scientific knowledge in everyday life, and thus underline the requirement to reconsider the orientation of science textbooks in Greece.

◆ HIGHER EDUCATION & TEACHER TRAINING

Chair: Tânia Maria F. Braga Garcia

Room: 1505

Textbooks aimed at guiding teachers in teaching

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This paper presents a project which has as its main objective to list and analyze didactics and teaching methodology textbooks produced in Brazil. The analyzed textbooks have the purpose of guiding teachers on how to teach specific contents of different school disciplines. These textbooks have been conceived as materials, which contribute to teachers' basic and continued education, teaching them how to teach. They can be understood as visible elements of the disciplinary code of disciplines related to didactics and teaching methodology and they contribute to the understanding of the ways teaching and learning spread in the Brazilian school culture throughout time. Since the beginning of the 20th century, this type of pedagogical literature has marked the school culture and it continues to be produced until today to be sold in bookshops or as part of governmental programs for public school teachers. This study highlights the quantitative aspects of the textbook collection owned by the Research Group in Didactic Publication of the Universidade Federal do Paraná, describing the process of organization of their online database, in particular regarding general didactics, science didactics and physics didactics textbooks. The paper also presents the results of a content analysis of the textbooks, focusing on their objectives and contents for physics teaching in the initial grades of elementary schools. It has been observed that elements of the active school still remain today, especially the idea that the student is the center of teaching and, also the concern in situating the content in relation to the students' interests and lives. It's important to highlight that observation, valued as the initial step of the teaching procedures in the handbooks of the beginning of the 20th century, came to be understood as a reference point in building questions to be analyzed by the children. Thus, the questioning becomes the starting point for teaching, demanding the action of the student over the phenomenon to be studied, which is realized by experimentation. This was one of the changes found in the analyzed manuals.

Being a history teacher: handbooks for teachers produced in Brazil (1984–2014)

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This paper presents the results of an ongoing research, which aims to identify and analyze what it means to be a history teacher in Brazil based on what is expressed in history didactics handbooks. These handbooks are sources, which allow the understanding of the ways of teaching valued and spread in different historical contexts. The handbooks are different from the books aimed at students. While students' books are focused on the content of the disciplines to be taught, handbooks focus on teachers' formation to teach. The basic premise of the research is the idea that every book establishes certain orders as a result of the production process, the wishes of the authors materialized in the books and the readers' deciphering. Thus, the study aims at identifying elements, which demonstrate the conception of a history teacher expressed in these handbooks. The research was based on the content analysis of seven history didactics handbooks, which were produced in the phase known as the reconstruction of the history disciplinary code (1984–today). The findings indicate that the conception of teacher present in most handbooks is influenced by the general didactics and by psychology, especially sustained in social-interactionist approaches and in the concept of mediation. The conception of a teacher based on the specificities of the referenced science and its epistemology had very low incidence.

◆ HIGHER EDUCATION & TEACHER TRAINING

Chair: Tânia Maria F. Braga Garcia

Room: 1505

The use of tools of university electronic environment in the teaching and research activities of students

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The article identifies the source of learning and research activities of undergraduate students coming from the university's electronic environment. From the responses obtained from the 170 students have been identified reasons and ways to use electronic resources and the appropriate needs of the students. Furthermore, it was examined whether these reasons along with student needs are influenced by gender, age, form of study, level of studies, computer equipment and computer skills. The study was established as part of the project solution in 7th Framework Programme, within the Marie Curie Actions International Research Staff Exchange Scheme, Grant Agreement No: PIRSES-GA-2013-612536 with the name of the IRNet (International Research Network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences), which is engaged in the research and development of educational applications of ICT in a multicultural context.

The didactics as a school discipline: Study from the general didactics manuals

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This paper examines elements that make up didactics as a school subject, taking as empirical reference the didactics manuals published in Brazil from 1980 on, which are understood as visible elements of the disciplinary code (CUESTA FERNANDEZ, 1998). The main issue that has guided the research is related to the possibility to check if and how the discussions in the field of knowledge are expressed in the General Didactics Manuals whose main purpose is to guide teachers to the teaching action or, in other words, teach how to teach. A qualitative research was developed in two stages: in the first one, 18 manuals of general didactics from the 1980s, 1990s and 2000s were identified; in the second one, 9 out of these 18 manuals were selected, 3 of each decade were chosen. In order to do this analysis, categories, such as the didactics concept presented by the authors, classic and new themes that are main part of the subject and didactic activities proposed when teaching this subject, were defined. The results of this work show that, assuming manuals as visible elements of disciplinary code, it is possible to identify the changes that have occurred in Didactics and how change took place. The changes in didactics as a scientific field have resulted in a clearer focus on the object of the subject involving education and teaching practices and as a consequence of these changes a new meaning of the aims of didactics was created. Our conclusion is that the disciplinary code of didactics expressed in the manuals shows a reconnection of the classroom contents and teaching methods, enhancing strategies and techniques without ignoring its other dimensions.

OVERVIEWS & GENERAL ASPECTS

Chair: Natalija Mažeikienė

Room: 1506

The role of teaching materials in educational innovation in early childhood education. Initial reflexions and analysis of good practices

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In this paper we present an initial reflection on the role of teaching materials in the process of educational innovation in Early Childhood Education. This approach to the field of educational media is part of the research project entitled 'Curriculum Design and Best Practices in Early Childhood Education: an international, multicultural and interdisciplinary view' coordinated by Professor Miguel Zabalza. The key research aim is to identify, to analyze, to represent and to make visible good practices in early childhood education and create a pluralistic flexible framework based on the experiences studied. The paper begins by addressing the theoretical approach to four issues:

- (1) the meaning of teaching materials in early childhood education;
- (2) the roles that can be played by teaching materials in early childhood education;
- (3) criteria to be considered for selection as good practice; and
- (4) the role of materials in the processes of teaching innovation. Regarding the main stages of the project and the instruments analyzed, the paper goes on to present some examples of good practices in early childhood education that illustrate the role given to materials and to present some initial conclusions.

Was Edison right? Educational media at a crossroad

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A quote of Edison, 'books will soon be obsolete in the public schools', from the beginning of the last century pointed at the rapid changes to be due to the development of technology, in this case film. We had, however, to wait for those changes for some hundred years.

In our time we can argue that similar leaps should take place due to the frequent use of laptops and tablets in education. The question rises however if we are doing an 'Edison' again, or if there only will be minor changes.

My hypothesis is that there are obvious possibilities to change teaching, but that we need a thorough analysis of where we aim and about the possibilities of new media. To test this hypothesis I have used myself as a research object by trying out the Duolingo-app for language learning. The results will be exposed during the presentation. The presentation raises the question whether tradition is a serious obstacle for school development and because of that for the enhancement of children's learning.

OVERVIEWS & GENERAL ASPECTS

Chair: Natalija Mažeikienė

Room: 1506

B

OGA1

Why are boys doing worse than girls? Gender gap in reading performance

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The paper focuses on gender differences in reading. Findings of international research projects (PIRLS, PISA) reveal gender gap and disparity in reading performance – girls significantly outperform boys in reading achievements and boys demonstrate lower reading proficiency (OECD, 2014, MULLIS et al, 2014). Lithuania belongs to countries with the widest gender gap (OECD, 2014). An attempt is made in this paper to shed light on gender-specific nature of reading by referring to Lithuania's data in PIRLS (the Programme of International Reading Literacy Study) in 2011. The method used in secondary data analysis (including statistical analysis) of data from the Lithuanian sample of the PIRLS 2011 database).

Complex nature of gender difference is illuminated in the paper by referring to methodology and findings of PIRLS where reading is presented as an interconnection of psychological, educational and social factors (reading self-concept and self-confidence, reading motivation, home environment support, parents' educational background and educational expectations for their children, books in household, classroom instruction (including the use of textbooks), school reading resources, facilities, books and technologies, etc.). Authors discuss Lithuania's national data of PIRLS 2011 and delineate factors, which lay besides gender impact on achievement results. Gender dimension becomes apparent in reading for different purposes: gender gap in achievements in literary reading is higher than in informational reading. Gender aspect of four major processes of reading comprehension is discussed. The paper reveals gender aspect of pupils' performance in reading of 4 literary and information texts used in PIRLS and boys' and girls' attitudes toward these texts. In order to explain gender differences in reading additional theoretical frameworks are used - Bourdieusian notion of habitus, cultural capital, masculine and feminine habitus; gender theories and approaches to masculinities, female culture' and domination of feminine habitus within schools and educational processes.

B

OGA1

Digital resources plus lighter textbooks

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We all have certainly noticed the massive volume of bags that our students have to carry on way to school. Surely many of us have experienced the weight of these bags to help children or grandchildren to climb the stairs of their house ... We all know that these bags contain bulky textbooks. Bulky textbooks, mainly because they include many more pictures than the old books (what does not mean – far from it – to deny the educational value of illustrations in textbooks). And various additional books often accompany those bulky textbooks. And, increasing the weight, many students take also, on their bags, a laptop or equivalent. I ask a question arising from this observation: Is didactically possible to carry only the laptop in the bags and some additional resources on paper? That is, the computer is likely to be used as a basic instrument for each of the disciplines? For that, on each year, a program or programs corresponding to the heaviest part of the current school textbooks would be introduced on the laptop or equivalent? In addition, there would be a small volume of paper for each subject or group of subjects? A global question remains open: Digital educational resources could play a key role in the service of all students in order to meet the different student profiles of the current school, including those who have special educational needs?

 CONTENT

Chair: Ommund C. Vareberg
Room: 1201

Easy reading novels in Swedish classrooms – textbooks or literature?

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Today many people are worried about the reading abilities among young people and the position of literature is sometimes said to be threatened (PERSSON, 2012). In Sweden one solution more often advocated, is to offer children and teenagers that are considered demotivated and poor readers so called easy reading books. The market for this kind of books is increasing rapidly and the books are today widely spread in libraries and ordinary schools all over the country. Established authors of easy readers make numerous visits to schools, presenting and implementing ideas of reading and fiction to students, teachers and school librarians. Also these easy reading novels are often followed by material with questions and tasks aimed at guiding the reading in and out of the classroom.

Easy reading novels in Sweden have recently become a vital classroom resource in literary instruction. In our study we take Eco's (1981) perspective of the model reader, as an analytic standpoint. In our presentation we discuss results from an ongoing study about new written easy reading novels we investigate the texts including the literary instruction that goes with the books from an educational perspective. The results are that the novels have a stereotypical view and are gender biased; the model reader for the boys is a working class boy from suburban areas and interested in sports, for the girls relations are the main theme. The guides are mainly focused on tasks that lead away from the texts and rarely deal with questions related to interpretive and aesthetic readings. By using comparative text analyses of the actual literature and its teacher materials we discuss whether the main purpose of easy reading novels in schools is to serve as fiction or as teaching aids (SKJELBRED, 2010). In a critical discussion about this increasing genre we ask what the implication easy reading novels for young people might have for young people's literary development as well as for didactic implications on literary instruction at school. The results are that in Sweden, according to the market and the users, the easy readers are considered as literature. As such the texts ought to be regarded as a tool for reading instruction related to aesthetic reading. However, they are used as textbooks in a way that prevents young readers to develop interpretive reading strategies. Therefore a main conclusion is that the democratic project, which the easy reading books are a part of, is jeopardized.

A comparative analysis of school science textbooks: Greece and USA

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The aim of this paper is twofold:

- a. to present a framework for the analysis of the visual modes of school textbooks, and
- b. to exemplify the application of the instrument by analyzing school science textbooks from Greece and USA

As far as the first aim is concerned, a framework and subsequently a relevant grid for the analysis is developed. This framework takes into account the following:

1. the implied epistemic relationship between the specialized scientific body of knowledge and the everyday life-world knowledge of the students;
2. the formality of the visual codes employed, and finally;
3. the social relationships, embodied in the visual codes of the texts, between author(s) and reader(s).

Concerning the application of the instrument, an analysis, of twelve Greek science textbooks and three science textbooks, which are in use in the United States of America, is presented. It should be noted that

- (a) the Greek science textbooks used in all Greek secondary schools and each one of them refers to one discipline (physics, chemistry, biology) and one grade and
- (b) the USA textbooks being currently in use in 20 states cover all secondary grades (thus, they are considerably larger).

The analysis shows a strikingly similar general trend in both cases (USA and Greece). On the whole, a strong division between the scientific body of knowledge and the everyday life-world knowledge is projected in the physics textbooks, while the weaker division is observed in the chemistry textbooks. Furthermore, a similar pattern is evidenced regarding the 'positioning' of the reader (i.e. students) in the visual modes of the texts. Indeed in all the textbooks the visual modes tend to empower students to gain more control during the learning processes.

● CONTENT

Chair: Ommund C. Vareberg

Room: 1201

Geography textbooks in Spain and Portugal in lower basic education – a comparison?

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In our presentation we aim to present the results of a research developed in a post-doc stay at the University of Porto where we analysed and compared textbooks from Spain and Portugal. We compared the way that geography teaching is done in these two countries using textbooks. For each country we analysed the textbooks of the bigger publishing houses in each country for the starting levels of basic education (pupils between 6 and 12 years old). In Portugal, in 1st cycle of basic education (6–10 years old), Geography is inside the subject of 'Study of the Environment' and in 2nd cycle of basic education (11–12 years old) it is inside the subject of 'History and Geography of Portugal'. In a digital era, when the analogical format tends to decrease in teaching and education it is important to reflect about innovation in textbooks. Our work aims to contribute to the reflection about didactical innovation in textbooks looking to the freedom levels of authors and editors in the publication process. As methodology we selected textbooks of the biggest publishing houses of Portugal and Spain, then we selected similar contents in textbooks of both countries and then we compared the methodological options made by authors and editors for didactical solutions. As a result of our work we discussed the authors rights and the limitations of syllabus that can make end the textbooks in analogical format.

The results of this research give important points to discuss and improve the Geography textbooks in Spain and Portugal, but also lines of discussion and comparison with different countries. Moreover, we also made a comparison of the geography curriculum in Spain and in Portugal in order to better understand the differences in textbooks between the two countries. In our presentation we would like to discuss with colleagues at the conference not only the situation of the geography textbooks in Portugal and Spain, but also 'open' this

discussion to other colleagues from other countries in order to understand what can be improved in our textbooks (from Spain and Portugal) looking for good examples from other countries. Finally, with this presentation we also want to give a contribution to the research about the geography teaching in lower basic education (between 6 and 12 years old) because the research about this issue is still limited and unsatisfactory in our countries.

▲ COMMUNITY RESOURCES & LIBRARIES

Chair: Tânia Maria F. Braga Garcia
Room: 1604

Textbooks for rural schools: Conflicts between the norms and the school practices

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The research aims at analyzing elements of the National Program of Textbooks for rural schools (PNLD Campo), which was especially created by the Brazilian Government with the purpose of distributing textbooks to the students of schools located in rural areas. The books are produced by commercial publishing houses, however, they meet the requirements established by the Ministry of Education. The Ministry also determines the editorial, curricular, didactical and methodological characteristics of the materials by communicating them through public notices. The central issue of this study is to discuss the proposal of offering specific textbooks to rural schools, different from the books distributed to urban schools. The first phase of the research analyzed official documents, which regulate and organize this Program, verifying the characteristics of the textbooks destined to rural students and comparing them to the characteristics of the textbooks destined to the urban schools. At a second phase, a survey was applied to teachers who work at the schools of an Agrarian Reform Settlement, whose pedagogical orientation is given by the educational principles of the Brazilian Landless Workers' Movement (MST). The data pointed out tensions and conflicts between the conceptions of rural education present in the organization of the schools and the official documents analyzed, as well as the relationship established by the teachers with the books during the development of their classes.

Edu.data – Textbook systems worldwide

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The aim of the international information platform edu.data is to enable the comparison of textbook systems from around the world. Its focus therefore is on the documentation and presentation of comparable basic information relevant to textbooks; such as the development and application of textbooks within the individual education systems. Edu.data is dedicated to encouraging international access and therefore uses English as its standard language.

Contextual and background information is currently being gathered using the following criteria: education system, reforms, curricula, duration of compulsory schooling, education in the Institute's specialist subjects of geography, history, politics and religion; production, publishers, authors, approval system, selection, teacher training. The information listed under each of the basic categories is supplemented by a comprehensive list of sources and references.

The Edumeres team at the Georg Eckert Institute is not only creating edu.data, but will also sustain and maintain it. To support this aim a close feedback relationship will be cultivated with the researchers using the system, who will not only supply further information, but will also share with us any additional requirements they may have, which can be incorporated into the system during its subsequent development. In this way edu.data is able to fill an urgent desideratum of textbook research, which is commensurate with contextual, user-oriented information and is guided by the particular information needs and methods of working of its users.

The editorial team has researched basic information on the textbook systems of over 100 countries and entered them into the database. Research has generally been limited to the national level, however, the team is progressively including regional information for countries with a federal structure.

A public test version went live online in March 2015. The full version should be ready to launch in September 2015.

▲ COMMUNITY RESOURCES & LIBRARIES

Chair: Tânia Maria F. Braga Garcia

Room: 1604

Digital resources and sustainable communities of French teachers: From emitting sources to formal communities and back

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Regarding educational resources, a key factor is linked with the agency of teachers, with their ability to find ways of teaching that are simultaneously innovative, efficient and acceptable by their milieu. This agency may develop in very different conditions: at the one end, teachers may become clients of other teachers and providers of resources for others (ABRAMOVICH & SCHUNN, 2012). At the other, they may act within communities of militants (QUENTIN & BRUILLARD, 2013).

The analysis of online resources present on the French web confirms the existence of a tension between captive communities depending of pedagogical authorities, either national or regional and communities of militants. Members of captive communities produce resources that have to be approved by a pedagogical hierarchy. The second ones are built around pedagogical and political ideas that may not be mainstream (e.g. developing open resources for constructivist approaches in sciences or mathematics) and more or less rely on self-funding.

What are the goals of these initiatives? What are the processes that contribute to form a community in this case? How do these emerging communities sustain themselves or transform into something different?

In order to bring elements of answer to these questions, we have explored the French web and are leading interviews both with individual in the Science and Technology field, and in primary schools. From a methodological point of view, we were inspired by the work of Ostrom and colleagues about the sustainability of communities exploiting commons (OSTROM & BASURTO, 2013).

Preliminary results show that beyond the models described by QUENTIN & BRUILLARD (2013), a third form should also be considered. In this case, there is no explicit community: the production of resources comes from personal initiatives and is not really mutualized. It aims at serving a public of peers. One may consider them as transient proto-communities growing around individual emitting sources.

USE OF EDUCATIONAL MEDIA

Chair: Zuzana Sikorová

Room: 1503

Images as resources in biological sciences teaching

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Images occupy a major place among biological teaching resources, as they are massively present in textbooks and lecture slides. At the French secondary school level examined here ('Seconde' equivalent to 10th grade), biology programs scan broadly a wide array of biological systems at different scales (molecular, cellular, species, ecosystem) related to three major themes: earth as a host planet for life; global contemporary challenges (energy and food supplies); human body and health. They explore intern functioning as well as relationships between components and different systems. In this context, images are used in various teaching activities such as documents analysis activities or to show example of results that should be obtained during experimental activities and not only to display biological diversity.

This presentation will focus on a work in progress regarding resources used by biology teachers in French secondary education. Early analysis and insights will be presented here, focusing on images. How biology teachers do find and select images? Which types of images (scientific, everyday life) are selected? For which purposes are they used? In what kind of teaching strategies are images called? After giving an overview of the main sources of images available, giving examples of French image databases (institutional or commercial) designed for teachers, we will focus on analysis of biology teachers' habits towards images. First steps of inquiry involve semi-structured interviews conducted with teachers, aiming to identify not only which resources and along which criteria and influences they select, but also uses of images in teaching activities and attitudes towards them.

Teaching rhythm reading to adolescents

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The purpose of this study is to compare two forms of teaching rhythm reading to adolescents between sixteen and eighteen years old, without previous knowledge of music theory. The Hypothesis to be verified is that is more effective teaching using Jean Piaget's Genetic theory, in which teaching most necessarily starts with action, going through the mental representation and culminating in operation. In this way, teaching in its first approach starts with music theory that means, using traditional methodology. And the second starts with the action, that is experienced practice, inspired in Jaques-Dalcroze's active method of music education which respects cognitive stages of participants. Therefore, it is important to observe what the better way to teach the content of music is, specifically rhythm reading, because most of those students never get in contact with this field of knowledge. This study used a quasi-experimental methodology for data collection, as a pedagogical intervention which was performed and compared two groups of students totaling 64 subjects divided into two, aged between sixteen and eighteen, without using the control group. A pre-test before the teaching experiment was conducted, then three classes were taught followed by two post-tests, the first of which happened right during the week following the lessons and the second occurred after 19 weeks for group A, and 23 weeks in group B, in fact to assess the robustness of each learning group. The results showed that the grades of the post-test 1 were very similar in both groups, the difference was negligible, and the average value of the rhythmic run was 5.19 for group A, and 6.0 for group B. Already, the average final group A was 7.27 for the final average and 8.02 for group B. In the post-test 2, the group grades decreased in both groups. However, in group A the drop was more significant; the grade of execution was 2.04 and 4.10 to the end. In group B the grades on the rhythmic reading decreased to 4.47, and 6.45.

■ USE OF EDUCATIONAL MEDIA

Chair: Zuzana Sikorová
Room: 1503

Pedagogical practice of the teacher and the textbook of science: an approach based on the experiences of the PDE/PR

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The science teaching in the elementary school has introduced curricular changes resulting from a constantly changing in economic, social, political and cultural society, which are reflected in school practice and show to the new teacher attitudes related to theoretical and methodological aspects. This study has tried to identify how teachers who take part in the Educational Development Program of Parana (PDE/PR) used science textbooks in their teaching activities. This study was conducted on the base of the several functions performed by the textbook: learning facilitator, support for techniques and organizer of the contents to be worked. (CHOPPIN, 2004). The study was developed from the analysis of the articles content, produced by these teachers during their activities in the PDE Program. After reading all the articles and identified those that, somehow, mentioned the use of Textbooks, these were classified according to the categories 'use of Textbooks in teaching practice' and 'gaps in the Textbook'. The results indicated that in a daily classroom routine the Textbook is considered an important source of research and an instrument to help the comprehension of scientific concepts, both by students and teachers. It also serves as a reference point to establish relations with the local reality and the curricular approaches of the suggested content in Science teaching in elementary school.

The use of multimedia in education and socialization

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Today's reality is clearly determined by the multi-media and new technologies: E-books, interactive whiteboards, internet, newspapers, radio, and television. Polish students live in both the real world and in cyberspace. In the 21st century, Polish students use along with textbooks advanced information technologies. This situation is sometimes referred to in the literature as cyberculture, the concept adopted for determining metaphorically culture in postmodern times, emphasizing its domination by electronic media. This article is both theoretical and empirical, and presents the current dimension of the cognitive process. The main research question was, what media do Polish students use and what is the impact of social media on their socialization and education. As a research method I used diagnostic survey, questionnaire technique and copyright research tool in the form of a questionnaire.

● CONTENT

Chair: Jim McCall
Room: 1504

The teaching of botany in Portugal. Analysis of textbooks of primary school education (1900–2000)

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This research paper has as its main aim the understanding of the place that Botany was given in textbooks of natural sciences used in primary education in the last century in Portugal. In an attempt to interpret the shifts in the content approach for botany, didactical books of the chosen educational level have been studied according to eleven principles: Form, Kingdoms, Classification, Organs, Roots, Stem, Leaf, Flower, Fruit, Reproduction and Dimensions. This study, based on a qualitative methodological approach, is supported by a content analysis and the establishment of a posteriori categories, as well as a cluster analysis through the construction of dendograms. These latter constructions were intended to promote the comparison of first hand sources – textbooks – taking into account the pedagogical and didactical orientations, the educational and curricular policy recommendations as well as the educational and scientific values suggested.

Textbooks are of great importance to schools and teaching as they develop important pedagogical functions, especially in relation to their structural arrangement of the forms and the content of pedagogical knowledge, including aspects related to the sequencing and rhythm of knowledge transmission through, for instance, activities that promote and evaluate the forms of the knowledge acquired. Textbooks, therefore, can allow access to knowledge about the pedagogical ideology on which they are based, to the way the teaching and learning process that happens in the classroom is understood and to the roles that are developed by pupils and teachers.

Data analysis shows that changes have occurred in the naming of the teaching of natural sciences and in the contents approached, which have assumed different relevance through time. Therefore, one may find the de-complexification, the dichotomisation, the de-conceptualisation and the conservation of various botanical contents distributed throughout different botanic dimensions; namely, the notional dimension, the morphological dimension, the functional dimension and the ecological dimension.

Activating & motivating children in logopaedic prevention and therapy: speech therapeutic stories

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Preschool and early school age (age 3–9/10) is the easiest period to shape the correct speech patterns in children. It is during this period that it is best to verify the existing or potential speech impediments and disorders. A large part of them stems from reduced articulatory motility and the insufficient performance of speech organs (especially of the tongue) which prevents proper articulation. Taking preventive and therapeutic measures during this time yields very good results. However, this is only possible when we support the child emotionally and linguistically. Emotions are closely linked to language, and the child's emotional state often determines the quality of speech (while a speech impediment or disorder that the child is aware of triggers a fear of speaking and low self-esteem), but also the outcome of logopaedic exercises the child does.

These assumptions are the premise of a speech therapeutic story – a fairy-tale which stimulates positive emotions and contains seamlessly embedded speech therapy exercises. The tool's mechanism is based on a little listener identifying with the main character. The child copies his proper behavioural mechanisms (coping with emotions) and language patterns (dealing with a speech defect or disorder).

Speech therapeutic stories may be presented in the traditional form (as reading or storytelling), but also in a modern version. Multimedia and mobile versions of stories enhance the interaction between the child and the story protagonist thanks to eye-catching pictures, clear animations, and motivating messages. Of particular importance, especially in the case of defects and disorders related to difficult sounds, are animations showing the correct places of articulation of certain sounds. In addition, these attractive animations present exercises to improve children's speech organs, which promotes correct sound imitation.

Speech therapeutic stories can be used by speech therapists during individual and group sessions in a speech therapy office as well as by teachers at kindergarten/school or parents at home (high frequency and regularity is conducive to obtaining great results).

So far, this concept has been the basis for the Polish speech therapeutic stories which are to help children improve their speech organs in terms of the pronunciation of the most difficult sounds like r, sz [ʃ], ż [ʒ as in mirage], cz [tʃ], and dż [dʒ, as well as to streamline their articulatory motility in the case of anatomical abnormalities in the oral cavity (short sublingual frenulum and the premature loss of deciduous teeth).

The aim of speech therapeutic stories is the eradication of a specific irregularity or the stimulation of a particular skill through a fairy tale with logopaedic exercises weaved into the plot and while providing emotional support.

The research conducted among children has shown highly motivated participants, reduced fear, increased regularity of logopaedic exercises, and the continuation of the recommended practice at home, which all resulted in quick and long-lasting results.

● CONTENT

Chair: Jim McCall
Room: 1504

Entertainment and knowledge in Scandinavian textbooks

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This paper explores how material from popular culture and entertainment discourse appear in textbooks for children in primary school, and how such material might affect children's engagement with and understanding of the texts.

Textbooks in general have undergone deep changes over the last century, especially when it comes to design and use of semiotic resources for educational purposes. The textbook pages no longer only 'carry' knowledge, they have become a semiotic and designed unit where meaning as well as social relations come to realization. Knowledge in general is becoming less canonical, more visual and more agency-based than before (Kress, 2010). In the middle of the 1990s, FAIRCLOUGH (1995) described what he referred to as a tension between information and entertainment in contemporary institutional discourse, especially in media texts. Two decades later, material from media and entertainment discourse seem to appear frequently in school textbooks (KRESS, 2010; VEUM, 2013). Despite the fact that most contemporary textbooks do have a design, which makes them seem very attractive to children, recent research found that textbooks of today are complex and difficult to understand (LØVLAND, 2011; SKJELBRED & AAMOTSBAKKEN, 2010).

The aim of this study is to explore to what extent and in what way traces of popular culture and entertainment discourse exist in contemporary textbooks, and what impact this might have on the educational purposes. I present some preliminary findings from a comparative study of 3–6 textbooks for the subject social science/ history/ geography, published in Scandinavian countries (Sweden, Denmark and Norway).

My research draws on theory from Social Semiotics, Critical Discourse Analysis and literacy theory (COPE & KALANTZIS, 2000; DJONOV & ZHAO, 2014; FAIRCLOUGH, 1992, 1995; KRESS, 2003, 2010; KRESS & VAN LEEUWEN, 2006).

Analysis of visual components in Czech history textbooks for lower grades of elementary schools

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The paper analyses visual components in Czech history textbooks for primary school pupils in terms of their type (photography, artwork and illustrations.) and content (12 content categories have been identified) according to the historical period. The research method used was a content analysis. The number of images was determined by frequency analysis and statistical calculations, univariate data analysis has been applied (measures of central tendency and variability). Correlations were calculated using the Pearson correlation test and chi-square test was also used to compare the number. Altogether 1074 visual components were analysed in 13 textbooks from 7 publishing houses. The number of images is directly proportional to the extent of the topic. 42% (455) of the visual components illustrate historical events of the 19th and 20th centuries. Preliminary results show that the number of visual components differs significantly according to individual publishers (minimum of 81, maximum of 208). In textbooks from one publisher there is 153 images on average. As for the type of visual components, artistic illustrations were dominant (50%) followed by photography (42%) – here we can once again see the publisher's influence. Historical maps comprise 6% of all images and the rest are scientific illustrations, diagrams and charts. Based on the content then there are a majority of specific individuals (183 – 17%), then historical artefacts (157 – 15%) and specific historic events (156 – 15%). The results also show that the specific content of the illustrations in textbooks from various publishers is very similar (the same people, the same historical events) and sometimes they are even the same picture – the differences are then rather in graphical rendition particularly of common scenes (e.g. life in a town, burghers' clothing in the 19th century, etc.). The results highlight the fact that the historical curriculum presented in photographs, art illustrations and maps is fairly consistent, but some differences exist, relating in particular to the extent of some thematic units and therefore the number of visual components..

◆ HIGHER EDUCATION & TEACHER TRAINING

Chair: Jesús Rodríguez Rodríguez
Room: 1505

Student teachers' knowledge of the quality of learning materials

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In The Netherlands teachers still heavily depend on textbooks, folio and digital. When they select new textbooks, they mainly tend to look at content-based criteria, or at criteria with respect to the attractiveness of the material. They hardly look at criteria that have to do with how textbooks can help pupils best in acquiring knowledge. Also in other countries we see this phenomenon. The question is what (student-) teachers really know about how learning processes take place, and what that means for the design of learning materials? Do teacher-training institutes pay attention to these questions?

We designed a test for student teachers about the design principles of MAYER (2003) to assess what student teachers know about how to avoid cognitive overload by pupils. We compared student teachers of students from Universities of Applied Sciences with students from the General Universities. Students of the first kind of universities are educated to become a teacher, students of the second universities as a teacher with an academic title (MA). We developed a test containing 15 items where the students were asked which of two different kinds of content visualisations like (a combination of) texts pictures and videos would produce the most cognitive load. At this moment the data of 134 participating student teachers are analyzed. The results will be presented at the conference.

The views of the students on the use of social networks to support higher studies

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The article deals with the issue of the support teamwork to college students using social networking or other forms of virtual communities. In the research files of 170 students of the University of Ostrava were examined whether and to what extent can the selected characteristics of the students (age, gender, mode and level of study and ICT competences) to influence their participation in cooperative learning in social networks. The study was established as part of the project solution in 7th Framework Programme, within the Marie Curie Actions International Research Staff Exchange Scheme, Grant Agreement No: PIRSES-GA-2013-612536 with the name of the IRNet (International Research Network for study and development of new tools and methods for advanced pedagogical science in the field of ICT instruments, e-learning and intercultural competences), which is engaged in the research and development of educational applications of ICT in a multicultural context.

◆ HIGHER EDUCATION & TEACHER TRAINING

Chair: Jesús Rodríguez Rodríguez
Room: 1505

Undergraduate degrees and textbooks: A necessary interlocution in teacher education

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The article aims to analyze the interlocution of the undergraduate courses with the Basic Education early years in initial teacher education, from a documentary research in undergraduate courses and interviews with teacher trainers. It analyzed the study of teaching materials in initial teacher education and the training of authors of books distributed in the National Textbook Plan for 2010 and 2013. The research, of a qualitative approach (documentary research and interviews) and based on the historical materialist dialectic, takes as epistemological axis the theory concept as practice expression, according to BERNARDO (1992), CASTORIADIS (1985), MARTINS (1996), SANTOS (1992) and THOMPSON (1981). The results indicate that the educational materials are hardly discussed in teacher training courses, few authors have experience with the early years, not contributing in this way to the dialogue of degree courses with basic education. The article discusses the guiding principles that are the educators practice expression in search of the necessary interlocution of undergraduate courses and Basic Education early years. These principles could serve as basis to think about an emergent literacy undergraduate course.

Write paradidactic science book: an experience with Faculty of Education students

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The improvement of science teaching passes through, among other things, the revision of curriculum models of the courses of the teachers' initial and ongoing formation. However, we must not forget that this is merely one of the aspects of a multifaceted problem. In Brazil, teachers of the initial years of Primary are formed in the course of pedagogy and their curriculum is centered on the humanities. In that case, the sole contact they have with the physical and natural sciences is in the didactic discipline of general science. To enliven that initial scientific formation, we propose a set of activities that tend to promote the student autonomy to be able, later on, to evaluate the own knowledge and seek alternatives for solving the problem of lack of command over scientific concepts. One of the activities proposed is the production of paradidactic science books for children of the Primary grades. Such books, different from textbooks, address subjects of interest for children, subjects that are not present in the science textbooks. After having chosen a subject, the pedagogy student has to do a study and write a scientific text that subsequently will be analyzed and discussed with university colleagues. A second phase consists of elaborating a conceptual map of the topic. In a third phase, the student has to do a study of the preconceptions of children for whom the book is intended. Finally, the student of pedagogy must write a book for the children. At the beginning of the semester, when I presented the steps for the construction of the book, the future teachers doubted their ability to write the texts. It seemed something very distant, but at the end of the activities, he concluded: 'the production of a book is laborious, but it is an excellent exercise for the production of children's texts.'

OVERVIEWS & GENERAL ASPECTS

Chair: Péter Bagoly-Simó

Room: 1506

Teachers' attitudes towards curriculum innovations: Introducing the state of the art

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Innovations of curriculum and their implementation within school instruction represent a complex process which needs to be founded in well-designed plans and is underpinned by other factors of material and non-material nature. Besides frameworks, objectives and other mechanisms that seek to guide curriculum, important factors are also represented by textbooks, which are concrete and used more on a daily basis. Moreover, textbooks, and their adoption, represent an important routine regarding updating the curriculum in shorter periods of time. However, in comparison to the other factors, textbooks are sometimes perceived as 'conservative influence' within the curriculum that may constrain pupils' opportunities to learn. The attitudes and efforts of teachers – as key stakeholders of curricular changes – play therefore an essential role, but may vary in relation to a concrete sociocultural context. In school practice, a gap may thus arise between curriculum developers' intentions and teachers' perceptions of the textbooks. In this respect, the paper aims to explore the state of the art related to the research on teachers' attitudes towards the planned (frameworks) and realized (textbooks use) curriculum with a special focus on its implementation into school practice. The review is patterned on the following perspectives: a) factors which can influence teachers' willingness to implement the curriculum innovations; b) barriers of the implementation; and c) methodological perspective of the studies, which should provide a base for further research in this area.

Research background in the field of textbooks and teaching materials in music education

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The purpose of this paper is to review the research literature regarding the various perspectives and lines of research that have been developed in recent years on textbooks and teaching materials in music education. The research lines considered in relation to textbook curricular materials are the following:

- a. Role and influence on classroom practices;
- b. Underlying ideological discourse;
- c. Analysis of formal aspects;
- d. Impact of policies and educational reform processes on materials characteristics;
- e. Analysis of curricular discourse and teaching profession;
- f. Textbook marketing processes and free-textbook programs;
- g. Evaluation guides and materials analysis; and,
- h. Research on the development of alternative materials.

The paper concludes by pointing out interesting lines of inquiry on curricular materials for future research.

OVERVIEWS & GENERAL ASPECTS

Chair: Péter Bagoly-Simó

Room: 1506

School textbooks in Colombia: definitions, dimensions and research fields (2000–2015)

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The education system in Colombia is being modernized and improved, what it is currently evolving toward new policies. In this context, researching into the school textbooks in Colombia is a promising field that, over the years, has been taken by different research groups at university level. In the early seventies of the last century, first research projects, which were limited, dealt with ideological issues in the education processes related to the training of political leanings. Over the years, research topics and approaches have changed and study methodologies have become more subtle and complex. Thus, during the years from 2000 through 2015, researchers have become interested in issues related to the textbook: (1) curriculum; (2) bias, values and stereotypes; (3) school textbooks and representation of ethnic groups; (4) school textbook and content analysis, and discourse on such historical concepts as childhood, family, French Revolution, nation; (5) learning and use of textbooks; (6) content and teaching of reading and writing processes and (7) training of citizenship. Therefore, four big research topics on the school textbooks in Colombia can be considered: (1) a supporting tool in the development of academic knowledge; (2) an ideological and cultural vector, and (3) a teaching tool. In this context, the main purpose is to show how the use of textbooks has become a growing research topic in Colombia and other Latin American countries. Based on the analysis of the scientific production, the main features of this research topic and their major developments will be outlined, and some other new and promising research topics will be proposed. To develop the theoretical and methodological considerations of the use of school textbooks there will be used three types of papers or bibliographical sources such as articles published in magazines, individual and group contributions to collective works, and complete individual or group works, which have been published by their authors or by national or international institutions.

'1989 and all that': Geography Curricula and Textbooks During Post-Socialist Transformation

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Economists often consider the European integration of former socialist countries as a landmark of a completed transition from command economy to market economy. As exemplified by current political and social development, societies, however, seem to be dealing with the legacy of socialist Europe. Most former socialist satellite countries or member republics of the USSR are still embracing transformation. Both transformation and its effects are vividly depicted by systems with explicit inertia, such as public education. Drawing upon general theories of post-socialist and post-soviet transformation, and the more specific theories of institutionalism and evolutionism, this paper sets its focus on the change of educational media in former socialist Europe. The case study of Romania and of the subject Geography serve as an example to analyze the mutations that occurred between 1987–2014 regarding both curricula and textbooks. The main results of the longitudinal analysis are complemented by insight into the changes within individual cohorts of textbooks. Secondary Geography curricula and textbooks were subjected to qualitative and quantitative analysis. The results show a strong continuity of tradition on the content level. In addition, both curricula and textbooks seem to have not yet implemented aspects of constructivist approaches.

● CONTENT

Chair: Ommund C. Vareberg
Room: 1201

How can English language textbooks contribute to the development of intercultural competence?

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The national curricula in Denmark, Norway and Sweden all indicate that learners of English are expected to develop intercultural competence as part of their language studies. Intercultural competence can be defined as ‘the ability to communicate effectively in cross-cultural situations and to relate appropriately in a variety of cultural contexts’ (BENNETT & BENNETT, 2004). The curricula describe this competence in terms of the learners’ language and communication skills as well as their cultural insight and attitudes of openness, respect and understanding for people from other cultural backgrounds. My presentation shows how central textbook series in the three countries help learners in years 7–9 meet these objectives.

Central principles for classroom work with intercultural issues constitute the theoretical framework for the study, such as focusing on cultural similarities as well as differences (SAMOVAR et al., 2007), providing multiple perspectives (KRAMSCH, 1993) and helping learners ‘decentre’ (Byram, 1997). I also draw on Scollon, SCOLLON & JONES’ (2012) notion of interdiscourse communication.

My data stem from four textbook series, one from each of the four countries. I focus only on the texts and tasks that seem to have relevance for work with intercultural issues. The texts are categorized in terms of their cultural focus. Some texts provide factual (often historical) information, some provide a tourist’s perspective, some describe cultural encounters, some encourage reflection on cultural differences and open for meetings with ‘the other’. The tasks are categorized in terms of the ways in which learners are encouraged to deal with cultural issues. In my presentation, I will discuss the characteristics of texts and tasks that can be said to support the development of the learners’ intercultural competence.

Historical and intercultural. The presence of Islam in textbooks

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This work began with a consultation with students from a 2nd year of high school in a state school of Paraná in 2009. As research tool, we used brainstorming, in history education perspective. Students were asked to associate at most four words with Islam. The results showed an association of the theme with violence and terrorism. In master thesis, we decided to investigate how this issue was discussed in history textbooks of several periods, historically defined by the criterion of their legal regulation, trying to understand if the history textbooks content somehow contributed to the results showed by the students. Keeping in mind Peter LEE’s concept of substantive ideas (2001), we sought to investigate the concept of Islam present in those textbooks. Using a) Jörn RÜSEN’s theoretical concept of ‘historical culture’ (1992); b) Eduard Said studies on ‘the idea of other’, in his work *East*; and c) the UNESCO work about the ‘knowledge of the other’ (2008) and observing how Islam and Europe are mentioned in textbooks of several countries in Europe, Africa and Asia, we tried to compare how these contents were discussed in the textbooks of these countries and in textbooks from various periods in Brazil. The textbooks investigated were chosen for their relevance and use in schools. Each textbook was related to a law that determined the organization of content in a dialogical relationship. The first textbook researched is dated in 1911 and the last one in 2011. Within the narratives found in textbooks five categories, one about the location and description, one about the Prophet Mohammad, one about the Muslim obligations, one about the religious narrative and narration about the Arab people.

● CONTENT

Chair: Ommund C. Vareberg
Room: 1201

An Influence of new media on the English language teaching process in secondary education in Poland

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The article presents the number of changes experienced by Polish secondary education system concerning English language teaching process. Mainly the recent change in the core curriculum when the new type of school was introduced to Polish education system a three-year-lower secondary school (gymnasium), as from now on the eight-year primary school was changed into a six-year one. The education process was divided into levels where gymnasium is third and secondary school is fourth after which students are supposed to pass the exam designed by the Regional Examinations Board. As a matter of fact, every year the Ministry of Education claims that the students' results are better. In 2014 71% passed A-level exam and 19% failed one subject so they are entitled to retake it during the August session, only 10% failed their A-level exam definitely. According to the Ministry the new examination tasks teach students creativity. By analyzing the A-level exams and part of books covering the same material from before and after educational reform the author would like to compare what changed.

The author elaborates on the growing influence of new media involvement in L2 acquisition – mainly the usage of language software, interactive white boards, overhead projectors etc., which recently got a lot of popularity and effectiveness, which is attributed to teaching using the new media.

For this reason, the speaker tries to define what stands behind so called intellectual success in Polish education system by showing the way the English language is taught in Poland as last year during A-level examination session 87,08% chose English as the leading language. The speaker, tries to state the clear line between what is educational and commercial in it. Additionally, Mr. Krzyk speculates on both advantages and disadvantages concerning the teaching process, along with its influence on motivation and the curriculum's content. How does such policy contribute to intensiveness and effectiveness of teaching. Finally, does the teaching methodology help with educational process or politics of the Polish state?

The national minorities and the grand narrative of Sweden

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This conference paper deals with how Swedish national minorities are represented in Swedish history textbooks for secondary school and upper-secondary school (2000–2014). In 2000, five of these national minorities (Jews, Roma, the Sami people [also indigenous people], Swedish Finns, and the Torne Valley Descendants/Tornedalians) were officially recognized as national minorities in accordance with the Council of Europe's Framework Convention for the Protection of National Minorities. This recognition has led to a revision of national school curricula and syllabi in the subject history with the intention that all pupils should be taught about the national minorities. In this study of history textbooks I investigate if and to what extent the revision of the curriculum has had an impact on the content of the textbooks. Such a change cannot be taken for granted, since there is no state approval scheme and teaching aids

In my study of the implementation of revised curricula in history textbooks, I use two methodological approaches: a qualitative analysis of the content of textbook(s) and qualitative interviews with history teachers and authors of history textbooks. In this presentation, I will focus on the textbook analysis.

In this study it is important to understand that the history textbook is a relatively conservative domain. In fact, even though textbooks of course also facilitate the understanding of the actual curriculum, they can, in general, be regarded as an arena for ideological conflicts and compromises. It is very difficult to make more substantial changes in the narrative of national history because there is a hegemonic national narrative. In this paper I want to emphasize how problematic and complex the implementation of the revised curriculum objectives in Swedish history textbooks has been in the post-millennium era.

■ USE OF EDUCATIONAL MEDIA

Chair: Zuzana Sikorová

Room: 1503

Middle school students experiences of using electronic textbooks in mathematics

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Textbooks continue to be a key teaching and learning resource for students (KNIGHT, 2013, 2015; KNIGHT & HORSLEY, 2011). Despite the widespread growth in practice, there are concerns about the extent to which effective use is being made of technology to improve the learning experience of students (KIRKWOOD & PRICE, 2014).

There are very few studies on the use of electronic textbooks (etexts) in secondary teaching and learning. The study reported here developed data collection instruments to assess students' online experiences, as no instruments were readily available. Focus groups were used to collect data on student reflections about their online experiences using an online read-only version of Maths Quest 1 for Queensland, Australia.

This presentation will report the results of a study that aimed to develop an understanding of the phenomenon of student online experiences during mathematics lessons; specifically those aspects that dominate the experiences and the ways students perceive their relationships amongst themselves and their teacher when using a mathematics etext online.

Future teachers and their reflections of learning materials focused on multicultural/intercultural education

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Although the concept of multiculturalism has been nowadays showing its crisis, multicultural/intercultural education as its reflection in school instruction has still been seen as one of the most important parts of education. With emphasis on the development of intercultural literacy, students as future teachers are trained how to cope with its issues. To support their performance, several resources of information are recommended; students can use the extra ones as well. The paper presents the results of a research probe where students were asked about the ways of working with the literature and learning materials and about the opinion on their conception, content and contribution to their education.

■ USE OF EDUCATIONAL MEDIA

Chair: Zuzana Sikorová

Room: 1503

The use of the internet in education

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Computerization of education creates a range of new opportunities to learn or acquire information. The ability to make use of up-to-date ICT, as early as in primary school, including searching for and using information, has been addressed in school core curriculum established by the Polish Ministry of National Education.

This paper provides an overall view of basic internet sources of knowledge, which are used in teaching and learning processes (e.g. e-libraries, e-magazines, educational portals, educational games etc.). It also discusses e-learning as a method of education. Finally, the study focuses on the issue of online threats.

The results of using ICT in teaching mathematics in the first graden

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The purpose of this study is to investigate if Information and Communications Technology (ICT) helps improve primary school students' (first grade) basic mathematical achievement regarding addition. Many studies provide increasing evidence of the effectiveness of using computer technologies in order to teach a variety of school subjects. The designed software that is presented in this paper is consisted of a story and several activities for addition that the students can do with and without the use of computers. The educational software was designed taking into consideration the background of 'Realistic Mathematics Education' (RME) theory for mathematical concepts. The present study was a pilot research of quasi-experimental design with one experimental and one control group. We found that the students who were taught with educational intervention based on computers and RME had a significant improvement on their general mathematical achievement in comparison to those taught using the traditional teaching method. Mathematics for first grade of primary school students has emerged as a serious area of study and academic research, as there is much evidence that teaching Mathematics with the use of ICT can be very helpful for student's mathematical achievement.

● CONTENT

Chair: Natalija Mažeikienė
Room: 1504

Analysis of selected didactic materials for the subject of art education in primary school

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The contribution presents ongoing results of the analysis of selected didactic materials for art education in elementary school. In comparison with other subjects, art education in the Czech Republic has a very small amount of textbooks currently approved by the Ministry of Education, Youth and Sports. In practice art teachers use large amount of 'unofficial' or outdated didactic materials. This is conjoined with insufficient (according to the authors of the paper) reflection of contemporary visual art in didactic materials and in education in general. The selection of didactic materials for art education at the elementary school was analyzed in terms of contemporary visual art reflection (relatively in the intervening time of the issuance of the material). The research method used is qualitative approach, specifically grounded theory. The contribution presents the current results of the research project, which is implemented at the Department of Art and Education, Faculty of Education, University of J. E. Purkyně in Ústí nad Labem (Czech Republic). The team consists of four students of doctoral studies.

Teaching the mother tongue: Reflection and rescue of moral values in our learners with micro-projects in the field of phraseodidactics

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Theoretical and practical research points out the need for greater presence and systematic teaching of phraseology units in language teaching of mother tongue. Taking it into account, the aim of this work is present the Research Project CAPES BX 7385/14-5 named 'Theoretically possible and didactically necessary: Phraseodidactics in Mother Tongue classes in Brazil.' It brings a proposal for a work related with titles of advertising texts with proverbial sentences. The paramount intention is to make students reflect and realize that in the discourse existing in those advertising texts, the speaker presents his arguments using proverbial utterances arranging them simultaneously in technical (objective), emotional (affective) and representational (credibility) manner, concentrating his efforts, however, in the order of feelings and emotions, because his aims is to impress the reader with the title of the advertisement and, doing so, he can hold absolute attention of the reader. The expectation is to endorse the presence and the pedagogical treatment of the study of advertising texts and the proverbs. Thereby, the used methodology will be the collecting of advertisements of the weekly Brazilian magazine called *Veja*, from January 2010 to July 2015, inserting them in Micro-Projects in the guideline Textbooks in Mother Tongue. As the result of this work, it is expected that using advertising texts as a pedagogical practice to education and learning experience, the consequence among the students involved will be highly positive. The reading and study of those texts will result in the incentive and development of the creativity of the learners and most of all in the critical thinking about their moral and ethical values while examining the persuasive 'money-making' aspects of commercial speech and also will contribute to the establishment of criteria for the selection, sequencing and orientation in this kind of material when used for mother tongue teaching purposes.

● CONTENT

Chair: Natalija Mažeikienė
Room: 1504

The presence of legal sources in history textbooks

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This paper analyzes the presence of legal sources (laws, governors' letters, official discourses) in history textbooks aimed at the 8th grade of Elementary School approved by the National Program of Textbooks in Brazil (PNLD). The research focuses on the sources approaching the issue of slavery in Brazil and African culture and history, which are mandatory contents for 8th grade textbooks. The qualitative research was structured based on the following questions: do textbook authors use legal documents in the books? Are they used as sources? Can they contribute to the learning process in history? Two textbooks were chosen to be analyzed for having wide acceptance among teachers of public schools and also because the authors expressed clear intention of working with historic sources. The results point out the presence of several types of historical documents in both textbooks, such as drawings, paintings, caricatures, maps, tables, photographs and memoirs. The legal documents were found in a smaller number: 18 documents in Book A and two in book B. Only in a few situations the documents found were treated as sources and explored in a way to stimulate the students to analyze the historical context, issues and interpretation. The results show progress regarding the inclusion of different types of documents in textbooks, but also show that there are difficulties in treating these documents as sources. This finding allows us to say that it is necessary to improve the ways in which the documents are included in textbooks, as well as that there is the need for a revision of the methodological work to treat documents as sources.

The social and political conflict in Colombia in school textbooks of social science secondary and basic education average: historical narrative and representation and historical representation (1999 – 2011)

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Content and historical representation of the 'social and political conflict' that characterizes the Colombian society in a 'corpus' of school textbooks on social science for 9th, 10th, and 11th school years, which were published in the period 1999–2011, are analyzed in this paper. For this purpose, some qualitative analysis procedures will be used. Some particular topics that are going to be presented are:

- (1) an analysis of the iconographic content and discourse on the 'Colombian conflict' in school textbooks related to social sciences;
- (2) a state of the art on the Colombian conflict through the review of a corpus of specialized documents based on three reports on violence and conflict in Colombia; these reports on the conflict were conducted by the National Center for Historical Memory and a set of specialized studies in order to establish a typology of cultural, historical, political, economic issues of the so-called Colombian conflict.

□ SELECTION & EVALUATION OF EDUCATIONAL MEDIA

Chair: Eric Bruillard
Room: 1505

Textbook evaluation: A content analysis of selected social studies textbooks at stage four (4) level in Zimbabwean primary schools

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The research study sought to find out if social studies textbooks used at stage 4 level in Zimbabwean primary school are deficient in content. The focus was on the relevance and adequacy of the content to meet National Curriculum Standards. Available literature point to the fact that some textbooks are big in page numbers, but teach less and that graduates from various courses are coming out raw in terms of their constructivist approach, space allocation for the various topics and the objectivity of content. Elements of bias, prejudice and bigotry were unraveled. The content analysis of the prescribed textbooks yielded massive data on numerous elements about the textbooks. A crafted instrument for textual analysis was used. Data was presented, analysed and discussed in line with the research questions and the analytical instrument. The findings of the research reveal an inherent deficiency in content in the prescribed textbooks. The findings show that there are glaring omissions of significant content in the textbooks. It also emerged that aspects like objectivity of text, multidisciplinary approaches, multiculturalism and the constructivist approach have not been addressed adequately in the prescribed textbooks.

The need to engage all stakeholders in the writing of course material and evaluation of prescribed textbooks would go a long way in assuring the availability of quality prescribed textbooks to learners. In this regard numerous recommendations have been proffered to ensure that textbook development benefits the teaching-learning process. It is interesting to study this area because social studies is a relatively new subject in the Zimbabwean primary school curriculum and it appears the subject area is not well resourced hence it needs interrogation.

History textbooks evaluation by high school students

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The topic of this work is the presence of history textbooks in the daily life of schools. It investigates the point of view of high school students regarding the history textbooks included in the National Program of Textbooks (*Programa Nacional do Livro Didático*) (PNLD) 2012. It is based on the need to approach the classrooms in order to understand what students think about textbooks and how they are used in the learning process. It is theoretically supported by the ideas of the ideal textbook indicated by RÜSEN (2010), and considers the determinations and criteria derived from the National Program of Textbooks, displayed in the official Notes and Textbook Guidelines PNLD 2012. The subjects who participated in the process are high school students from a public school located in a rural area in the outskirts of Curitiba, which is officially identified as a Rural School. The approved books were available for the students' analysis during history classes. The activity proposed to the students was based on analysis guidelines especially produced for this purpose. The guidelines were built with reference on elements and criteria established by the PNLD. The results show evidences that the students analyze the books based on general criteria, such as the quality of texts and images, as well as specific history criteria, such as the presence of sources and chronological content approach. In general, the young students presented a positive view of the textbooks analyzed, but were able to point out problems and limitation of the material, especially regarding the relation of the contents with the local culture.

□ SELECTION & EVALUATION OF EDUCATIONAL MEDIA

Chair: Eric Bruillard
Room: 1505

Analysis on the process of choice of physics textbooks: The influence of the labor conditions

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In this paper we present some results of a qualitative research (MARTINS, 2014) that aimed to understand some of the elements involved in the textbook selection by physics teachers at the high school level education in Brazil and Portugal. Based on questionnaires and interviews with these teachers and guided by the content analysis (BARDIN, 1990) results indicated that the textbooks, simultaneously understood as elements of the school culture, cultural products and market goods, are chosen through a complex balance between these dimensions and the formative and professional aspects of the teachers, together with the context and labor conditions where they act (MARTINS & GARCIA, 2015). It was noticed that the process of choosing, suffers significant influence of labor conditions, such as those elaborated through dialogues possibilities between teachers of different educational levels and different workplaces, considering his features and liaisons that occur among them. It was evidenced that the aspects related according to the number of students per class, the number of classes, the number of schools where the teacher works, and the number of weekly classes, affects the choosing process. This aspect was presented more clearly through the position of the Portuguese teachers, who, unlike the Brazilian teachers, revealed that the performance in few schools, with fewer students per class, and a small workload contributes for the choice of the physics textbook take in account the interaction between several educational levels and is, therefore, more suited for the school's expectations. In general, these labor conditions, for the Portuguese teachers, contribute that the choice of textbooks occurs in a long time, through a process developed by the group of school teachers. For the Brazilian teachers, such choice has been focused more on the educational level, in which teachers work, getting in these cases, more dependence on guidelines and regulations where there is a little scope of action, decision and losing the view of the entire process of education.

Goal directed teaching and visible learning

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A curriculum reform has taken place in the Danish primary and lowers secondary school, which has changed the national curriculum to a number of competencies. These are further divided and detailed into pairs of knowledge and skills. A big issue in this transformation is goal-directed teaching and visible learning (HATTIE, 2008). The Ministry of Education therefore financed a project 'Digitalt Understøttede Læringsmål' in order to develop teacher's competence with goal-directed teaching.

The project develops two main resources:

- 1) A tool called the Goal Arrow, that supports teachers in describing lesson plans and expressing associated situated learning goals, and then relate them to the national curriculum;
- 2) Progressive didactic intervention aims to support teachers' work to formulate targets in relation to pupils' learning and teaching context.

The Goal Arrow collects data from each student over a period of time, that makes it possible to sketch out a student achievement profile. The didactic intervention has taken place in 10 primary and lower secondary schools in Denmark from January to May 2015.

This paper also discusses gains and losses associated with digital tools for goal directed teaching and presents examples of how teachers use the Goal Arrow and the didactic intervention in practice.

OVERVIEWS & GENERAL ASPECTS

Chair: Tânia Maria F. Braga Garcia

Room: 1506

'In the lion's mouth': The challenges of writing art and music textbooks for Brazilian schools

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The main purpose of this presentation is to bring discussion elements over the production of school art and music textbooks concerning Brazilian reality. This paper takes as a starting point a recent experience of two authors from art and music background that wrote together a multi-arts textbook. The experience allowed a debate over essential issues in textbooks writing in the given Brazilian reality:

- 1) the asymmetric connections between production, distribution and use of school textbooks;
- 2) critics of the textbook as an ultra-formatted resource, denouncing its role as mostly conforming teachers instead of giving them classroom support;
- 3) the directiveness of the art subjects without bringing different points of view, approaching art teaching of forms of dogmatism (ARAN, 1996), and
- 4) the choice of a curriculum seemingly impartial, without considering the students' cultural reality. All the discussed issues bring important debates in the ways that art can be taught concerning the developing of creativity, the interdisciplinary approach in art teaching, the artistic autonomy, and the respect of students' learning particularities (SAVIANI, 2003). Taking a writing experience as a case study this presentation discusses the main challenges of textbooks authors, including editorial market economic matters, national curriculum guidelines, public textbooks purchases (in particular the multi-million dollar Brazilian PNLD program). The reported experience allows stating that it is possible to find original paths to write art textbooks seeking a creative approach towards art autonomy even taking the given complex reality of textbook production.

Islamic art as educational text

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In the first part of this paper at the IARTEM Conference 2015, I will present and discuss different ways of symbolic reading of Islamic ornaments. They are mainly derived from academic writings by Muslim researchers, and may be categorized as more or less minimal or maximal, depending on the degree of ascribing explicit meaning to geometric figures and stylized flowers. For some writers, the meaning of ornaments is functional, as their task is to embellish places and artifacts of religious importance, or to affect the viewer in some way. Through history, others have translated geometric forms into numbers, letters and words (i.e. numerological readings).

In the second part of the paper, I will discuss if, and eventually why and how, these diverse interpretations of ornamental art may contribute in an attempt to use Islamic ornaments as educational texts in school. Despite some exceptions, Islamic religious art is without figuration, and therefore may be presented as poor, without narrative or beautifying images. On the other hand, when geometry is understood as a religious language, it may open for new understandings of both mathematic and Islam.

The study of ornamental art as text leads to the study of more complex quibla-walls, as well as walls inside churches, temples and synagogues. In reading walls and buildings with or without religious importance, we may take advantage of contemporary views on multimodality and composition.

As a conclusion, I argue for the use of religious art, buildings and other primary sources in school, and propose a didactical model consisting of different dimensions, spanning from texts that should be interpreted in the light of a specific religion, to messages that may be understood as relevant for or common to all mankind.

OVERVIEWS & GENERAL ASPECTS

Chair: Tânia Maria F. Braga Garcia

Room: 1506

What you don't know will hurt you. A rhetoric of post-humanitarianism in Operasjon Dagsverk's Educational Materials

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For 50 years, since 1964, the organization Operasjon Dagsverk (Operation Day's Work, OD) has encouraged Norwegian students to work and collect money for one day a year. This money is then donated to projects that aim at educating youth in 'needy' countries. ODW develops an educational program, which is used in Norwegian public schools at the secondary level. The program focuses on global topics such as solidarity, human rights and education, as well as information about the project. Several booklets, pamphlets, poster and online resources are made available to the schools. Having taken part in the information campaign, the Norwegian youth should have gained sufficient knowledge and understanding to make a conscious choice whether to work on the OD-Day or not. The main idea behind the OD-Day this is that youth in Norway give away one day of their education, to give education to youth in the South.

My paper discusses OD's 2014 educational material, specifically their posters and pamphlet covers, which functions as threshold texts, inviting the students to engage further with the learning material. This particular material may be characterized as post-humanitarian in style (CHOULIARAKI 2010). My main research question is: Who is the model reader embedded in this material (ECO 1979)? Based on BAKHTIN's theories on dialogism (BAKHTIN 1981, 1986), and Vygotsky's emphasis on the role of language in cognitive development (VYGOTSKY 1987), I analyze the material in order to support my thesis, namely that OD's post-humanitarian threshold texts 'speak to the choir' and risk excluding and offending a great number of students. The paper thus speaks to bullet point no. 3 in IARTEM's Call for Papers: 'Research on Humanities classroom resources'.

The textbook according to Apple's view: An essay

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This work represents an essay on Michael Apple's thought and its relations with textbooks. It aims to make evident, from a corpus built from texts by and on the author, categories, which are significant to reflect on educational questions, in order to highlight concepts that can favour the comprehension of its relations with the textbook. It discourses on the influences that are perceptible in its theoretical construction, analyzing the author's contribution to an approach on how institutions produce and reproduce forms of conscience on behalf of the maintenance of social order. It highlights authors' critics related to the commercial profile attributed to the textbook, from its conception to the mechanisms adopted in its trade, demonstrating concerns with rentability or even a pure mercantilism on the part of publishers, both in terms of usefulness of the school text and of its use as a pedagogical tool. It verifies that the denouncement of plans to transform education in a mere commercial issue can be applied to the Brazilian context, in which they acquire specific characteristics and proportions that are consequences of power relations, against which the author opposes the concept of cultural clash in the context of a reconfiguration of social change itself. It distinguishes the belief in conflicts and resistance movements, conceived by Apple as one of the main characteristics of school, emphasizing the need to understand the contradictory roles that it exerts for the visualization of possibilities for individual and specially collective actions. It foresees the substitution of lists of concepts, facts and abilities that should be mastered in order to pass through the standardized tests used to evaluate school progress, by knowledge, which should come not only from tensions, contradictions and reproduction of models, but also from resistances, culturally built, in an interactive way.

CONTENT

Chair: Péter Bagoly-Simó

Room: 1201

Geo-media and visual literacy: Interpreting media images from a geographical perspective

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In the new Finnish comprehensive school curriculum, geo-media tools and resources are introduced as a new set of skills in geography education. However, an explicit definition of 'geo-media' is not given. In this paper, geo-media skills are understood as geographical media literacy skills. To establish this, three examples of media images are given and interpreted from a geographical perspective. (1) First example is an advertisement by Diesel in which a sexy couple is resting on the top of a skyscraper in Manhattan. In the background, the rest of the city is under water as if the sea level had risen that much. The advertisement is an effective example of not taking advertisements as banal representations, but questioning the geographical stereotypes they depict. With (2) the second example, a procedure of 'commutation test' is demonstrated by a photo of 'Reverend Billy' taken by a professional photographer. With this method, it is possible to analyze, which elements in a certain media image affect the most its meaning-making process (semiosis). A Finnish cartoon strip, 'Viivi & Wagner', is used as (3) the third example. A deeper level of geographical knowledge is achieved when placing the cartoon in the context of global phenomena of 2007; that is, the year the cartoon was published. With the above-mentioned examples, it is argued that students should have the opportunity to enjoy different texts; as it is pronounced in the new curriculum. In this paper, this is achieved by using texts published outside school. Moreover, the use of media images in geography education is not about delivering one correct answer for the teacher; on the contrary, it puts emphasis on arguing one's own interpretation.

Resource exploitation in german geography textbooks

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In the frame of the orientation to competence in the German educational system, traditional knowledge about resource exploitation has been reviewed. In the present paper, I will analyse the area of competence "Subject-specific Knowledge" by taking the example of resource exploitation. In a world of dwindling resources, a race for particularly sought-after mineral and

energy raw materials (eg oil, rare earths or cassiterite) has begun. The geographer Reuber (2005) pleaded for the teaching of resource conflicts in geography lessons, because they allow a deeper insight into the diverse political and economic linkages and global interdependencies. Resource exploitation and conflicts are complex, and one-sided and simplified answers have to be avoided.

I ask whether resource exploitation and conflicts are taught and represented in textbooks as a new subject in the context of human-environment relationships? Which regional focus can we find in textbooks that deal with resource exploitation? And how does geography textbooks deal with the complexity of situations? Which mineral and energy raw materials are treated? Germany has sixteen different curricula, because every region develops his own curriculum. Therefore, we have different geography textbooks. In the present study, I will focus on textbooks for secondary schools in Lower Saxony and Bremen. The method that I used for analysing the topic of resource exploitation in textbooks is prototypical for other geography textbooks. With the present paper, I will show the first results of the study that I actually conduct and that is not finished.

The role of geography textbooks in the time of new media

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Since the beginning of the 21st century, new media have emerged that can be used in geography lessons. But the textbook is still here and remains the most regularly used teaching medium. What makes the textbook so irreplaceable? How is the geography textbook used in the time of new media? Teachers from two different countries (Slovakia and the former German Democratic Republic) were asked to observe their lessons in order to answer these questions. The similar history and development of the two countries could have been a precondition as they provided a similar research area. The methodology of this research is based on grounded theory, which means that there were open questions and diverse hypotheses at the beginning of this research. These were changed, developed, and verified several times. Finally, research showed that the functions of the schoolbook are the core criteria to answer the questions named above. The role of the textbook in the teaching process was explored based on the functions of the medium. These functions can be used in lessons either only with the textbook or they can be supplemented or replaced by the other media. This research shows that there are no new media that could replace the schoolbook, but that there are teachers who could do this, although not all teachers could replace the textbook completely. Not only new media, but also traditional media have replaced the textbook in lessons. New and traditional media are now used in lessons in a different way. Every medium and each of its functions are replaceable. Their use depends not only on the teacher's competencies, but also, and increasingly, on the personality of teachers. New media influence the use of textbooks, especially through the hearts and minds of the teachers.

■ USE OF EDUCATIONAL MEDIA

Chair: Eric Bruillard

Room: 1503

Photocopy of educational resources in secondary schools: Articulating national quantitative survey and teachers points of view

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Since a decade Information and Communication Technology (ICT) have been more and more available in OECD schools. This phenomenon mask that paper documents still remain unavoidable supports during classroom activities. As a medium it is considered as ‘a superior medium for learning and digesting complicated and elaborated texts, while electronic screens are appreciated for quick information gathering, communication and navigation.’ (SNOOP et al., 2013).

HORSLEY & WALKER (2012) have compared in the Australian context, photocopies of textbooks and other resources with those from a national repository of online resources. They note that online resources made available to support a curriculum change, are used by only 3% of teachers. They point out that paper media remain fundamentals for teaching. In French schools, as in Australian ones, photocopies are major course materials. These activities are still poorly documented and thus require a full description of how photocopying falls within teaching strategies. Why are photocopies essential for teachers? To what types of constraints do photocopying documents respond?

Based on HORSLEY & WALKER’S (2012) method, a database (54,000 rows) produced by a French author society who conducts annuals surveys on photocopies in schools has been analyzed. Quantitative data remain a poor source to understand the phenomena. Consequently we conducted an investigation inspired by ethnographic methods in two upper secondary schools in the Paris region (2 half days per month between November 2014 and March 2015). Informal interviews have been conducted with about 30 teachers and administrators usually in reprographic services or staff rooms. This paper aims at presenting early results from the national survey in regards to the qualitative study.

In an explorative and open perspective we aim to look for possible answers to the following questions. From a didactic point of view, which constraints motivate how to build a photocopied document? From a pedagogical perspective which elements justify a significant use of photocopy? What are the differences in teachers’ speeches in regard to their taught subject? How teachers involved in prestigious or less prestigious streams describe and explain their use of photocopy?

Memory practices and media use in educational contexts: relationships between history, politics and memory in schools

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The curriculum of the German state of Lower Saxony states that history, taught as a school subject, enables young people to access their society’s ‘cultural memory’ and participate in the memory of their community. Can the history taught in schools today meet this objective, specifically against the present-day backdrop of today’s heterogeneous student body? What is the role of teachers and educational media in this context?

Research into educational media has focused primarily on the content of these materials. Policymakers, curriculum planners and educationalists still lack academically sound information on the ideas of history and its teaching and on the helpfulness of educational media in communicating history to young people. My research aims to fill this gap in our awareness of these issues.

Findings about contemporary history teaching will only be able to generate and implement recommendations for action when taken seriously by policymakers and educationalists. I am seeking to secure this by exploring the views of qualified history teachers at academic secondary schools via a mixed methods approach combining qualitative (semi-structured interviews with history teachers (N = 30)) and quantitative methodologies (quantitative survey (N = 3381)).

My data point to interrelationships between issues such as teachers’ media use, their thoughts on which specific historical events and processes are worth including in the canon of historical memory, and their views on the usefulness of educational media for the teaching of specific content and competencies.

I believe my research can contribute to the international debate around memory, curricula and educational media and provide insights for the further development of educational media and curricula going forward.

■ USE OF EDUCATIONAL MEDIA

Chair: Eric Bruillard

Room: 1503

What about the English resources selection in secondary education in France?

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As part of a research project on the management of resources (REVEA – Living Resources for Teaching and Learning) by high school teachers in France (colleges, general and technical high schools, and vocational schools), we questioned the types of resources used by English teachers: institutional resources, paper/electronic textbooks, manufactured/authentic/ modified materials, shared resources between teachers, etc. Several components are involved in the selection of resources by teachers: personal (representations, conceptions of teachers on their discipline, the teaching/ learning and on the public; the experience; the curriculum followed; spare-time activities...), institutional, cognitive (nature and organization of content) and social components (constraints of class, colleagues, program and institution) (ROBERT & ROGALSKI, 2002; RODITI, 2011). All these components are involved to varying degrees when a teacher chooses materials. Taking account of the different dimensions considered allows us to better understand the practices on resources selection. One can indeed ask what the criteria are that guide the selection of a resource in the classroom. What are the preferred resources by English teachers in secondary education in France? The analysis of 17 semi-structured interviews with English teachers helps to determine a resource panel, and to observe variations according to the different factors considered.

● CONTENT

Chair: Eckhardt Fuchs

Room: 1504

Visual representations of colonialism in educational films in the interwar period

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At the end of the nineteenth century the evolution of cinematography resulted in part from work done by film pioneers as well as experts in the field of educational research, who wanted to create new tools for teaching purposes. The film camera was seen as a machine that could not lie; the film itself as an apparently objective representation of reality. This view of cinematography continued to influence the approach of teachers, educationalists and researchers to this novel medium after the First World War. As a consequence a substantial body of educational films was produced for all types of schools and introduced in classrooms. Around that time colonial issues were an important subject in history lessons as well as in geography classes. In this context, educational films were used preferably to teach the students about colonial topics. But apart from the obvious content of teaching, these films reflect repeatedly the political attitude towards colonialism. In our paper we will examine what different perspectives were depicted and what kind of (visual) narratives were implemented in these educational films concerning colonialism by adapting a comparative approach. Methodologically, we rely on an interdisciplinary area of research including history, visual culture (PAUL, 2006) as well as cultural memory studies (ERLL, 2011). We argue that German, French and Italian educational films not only communicate political attitudes towards already existing, lost or recently gained colonies (French, Germany and Italy), but also contribute to our collective visual memory up to the present day.

Colonial heritage. Politics of memory and history textbooks since decolonization

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The presentation addresses Europe's colonial heritage and the ongoing debates about how to confront the imperial past after decolonization. These debates have fuelled the politics of memory in post-colonial societies and they reflect unease about the place and political or cultural function of the colonial legacy. In comparing Britain's and Germany's perceptions of themselves as post-imperial powers we seek to approach the subject from two different angles: that of a vast overseas empire whose imperial experience is still very vivid and that of a minor imperial power whose colonial past had almost been forgotten. For both cases we will draw on history textbooks as educational media, epistemic authorities and agents in the politics of memory. As textbooks identify relevant knowledge and construct collective identities they bring issues to the fore while at the same time they may become objects of debate. Against the backdrop of the postcolonial turn in cultural studies (CASTRO VARELA/DHAWAN 2005, RANDERIA/CONRAD 2002) our comparative analysis is based on history textbooks published since decolonization. It will focus on three aspects of British and German representations of modern colonialism in Africa. We will examine how textbooks discuss and visually represent European expansion in Africa, the so-called 'Scramble for Africa', how they approach colonial violence and how they introduce pre-colonial African perspectives. Informed by the approaches of historical discourse analysis (LANDWEHR, 2008), visual history (PAUL, 2006) and multimodality (KRESS/VAN LEEUWEN, 2001) we argue that history textbooks reflect the redefinition of imperial identities in Britain and the rediscovery of colonial pasts in Germany.

Mediating colonialism at the German Historical Museum – work in progress

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As Germany's national historical museum, the Deutsches Historisches Museum (DHM) in Berlin has to deal with the question, how to present colonial history today. German colonial history is already part of the permanent exhibition and has been subject of several special exhibitions in recent years. With the planned revision of the permanent exhibition (until 2020) and a special exhibition on German colonial history (expected opening autumn 2016) the DHM wants to introduce a stronger emphasis on postcolonial theories and entangled histories. Furthermore, singular objects, mostly from the museums' collections, will be presented from at least two different points of view: e.g. the perspective of the colonial rulers, source communities, etc. This multi-perspective approach offers different readings of the same object and makes conflicting interests visible and therefore allows reflecting the process of contextualization of historical events and objects critically. Through these approaches, the DHM wants to demonstrate the actuality and relevance of (post-) colonial histories by relating them to current debates (e.g. the recognition of the Herero and Namaqua genocide). The museum's educational program, consisting of guided tours, workshops for students, didactical material, a barrier-free website and an app, will play a crucial role in the mediation of the aims of the exhibition.

□ SELECTION & EVALUATION OF EDUCATIONAL MEDIA

Chair: Ommund C. Vareberg
Room: 1505

Designing learning resources. The use of fiction in textbooks for upper secondary school

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In this paper an analysis of six different textbooks for Upper Secondary School in Sweden after the school reform 2011 is presented. The purpose is to examine how work with fiction is organized.

Quantitative and qualitative methods are used and both gender theories and Bernstein's theories relating to horizontal and vertical discourse are applied to the empirical material (BERNSTEIN, 1990, 2000; CRENSHAW, 1995; DE LOS REYES & MULINARI, 2003).

How knowledge of fiction is organized is important to investigate when the work of fiction has received less space in the new curriculum 2011 (PERSSON, 2012; LUNDSTRÖM, 2011). Researchers have shown a lot of opportunities of fiction (ROSENBLATT, 1995; LAGNER, 1995; FELSKI, 2008; SKAFTUN, 2009; EAGLETON, 2013), but still we need to know more about how knowledge and reading strategies are created in learning resources (AAMOTSBAKKEN & KNUDSEN, 2011).

The study (GRAESKE, 2015) shows that work with fiction in textbooks is marginalized, particularly work with fictions created by women. The study also shows that students attending vocational programs have access to a different knowledge than students attending preparatory programs. This is remarkable, since the learning objectives in curriculum for vocational and preparatory programs are the same. Finally a tentative didactic design for work with fiction, which includes reader positions from both a vertical and horizontal discourse, is discussed. The design is inspired by a model of dialogical reading strategies (OLIN-SHELLER et al., 2015 in), but also include gender perspectives, and conceptual narrative systems from research on texts in new media (MONTFORT, 2004 in; SELANDER & KRESS, 2010).

Designing digital learning material

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VUC Syd is an adult educational centre teaching adult students at high school level and upper secondary level. Since 2011 we have been a 1:1 school, and every year we hand out approx. 3.000 iPads to our students. We only use digital learning material at the VUC Syd. Soon after we decided to become a 1:1 iPad school, we also realized that the amount of learning material available for the use on iPad was scarce. Therefore we decided to create our own.

Today we have set up an in-house publishing company where 16 of our best teachers are part-time eBooks authors and part-time teachers. They work together with an editorial group that consists of multi-media designers, video-producers, proofreaders, a copywriter and two editors who make sure that the pedagogical concept and didactic principles are constantly met with. This group produces and publish 3 new eBooks every week and the eBooks Store now holds 75 of our eBooks.

The concept is clear: We create books that

(a) are little building blocks, no longer than 10 pages, (b) make use of films, fotos, animation, text etc.,

(c) are case based, and

(d) are filled with tasks that motivate students to create digital products. The students who use our eBooks will not be passive readers or viewers, they will be producing 10–15 new digital products on the theme of the ebook, thus ending up with a collection of digital products that illustrate what they have learned.

The purpose with these ebooks is to give teachers the building blocks to build the learning material that fits a certain group or an individual student. To make it easy and natural to combine books so that working cross-curricular becomes easy to handle. To design tasks so that the students will become active knowledge producers.

□ SELECTION & EVALUATION OF EDUCATIONAL MEDIA

Chair: Ommund C. Vareberg
Room: 1505

A critical study of textbook publishing for primary education in Ghana

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The study investigated into textbook publishing for primary education in Ghana. It aims at examining the textbook publishing process for primary schools in Ghana and the evaluation of selected public primary school textbooks developed between 2005 and 2008 under product standard, design and presentation to measure their effectiveness. The descriptive and the content analysis method were used to collect and analyze the data. Teachers and pupils responded to a 37 textbook evaluation scheme to express their perceptions concerning various aspects of the textbooks. The researcher's primary goal was to establish a correlation between the variables "primary textbooks", and "children". To investigate the inadequacy of textbook theories, the researcher applied the grounded theory approach. The accessible population for the study was 780; a sample size of 508 was derived according to the strata, 88 Primary Teachers and 420 Public School Pupils. The data collection instruments used for the study were interview, observation and questionnaire. Findings revealed that learning could take place with textbooks without the teacher. The physical textbook cover is low in quality and cannot stand the test of time. There is lack of unremitting and vibrant professional interaction between pedagogical researchers and developers of textbooks and teaching materials. There is lack of a reliable evaluation system that would provide objective feedback on the quality and practical usability of recently published textbooks for primary schools in Ghana. Therefore, there should be a continuous and vibrant professional interaction between pedagogical researchers and developers of textbooks and teaching materials for quality development of Ghanaian primary school textbook. Publishers should aim at developing textbooks that can teach the child without the teacher. It is posited that quality textbooks will enhance effective teaching and learning in primary institutions in Ghana.



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