

The main objective of our experiments in the domain-specific track at CLEF 2008 is utilizing semantic knowledge from collaborative knowledge bases such as Wikipedia and Wiktionary to improve the effectiveness of information retrieval. While Wikipedia has already been used in IR, the application of Wiktionary in this task is new. We evaluate two retrieval models, i.e. SR-Text and SR-Word, based on semantic relatedness by comparing their performance to a statistical model as implemented by Lucene. When Lucene is combined with the semantic models the mean average precision increases by 14% for German, 9% for English, and 16% for Russian. In the bilingual task, we translate the English topics into the document language, i.e. German, by using machine translation. For SR-Text, we alternatively perform the translation process by using cross-language links in Wikipedia, whereby the terms are directly mapped to concept vectors in the target language. The evaluation shows that the latter approach especially improves the retrieval performance in cases where the machine translation system incorrectly translates query terms. When Lucene is combined with SR-Text, the mean average precision increases by 34%.

Categories and Subject Descriptors

H.3 [Information Storage and Retrieval]: H.3.1 Content Analysis and Indexing – Thesauruses;

H.3.3 Information Search and Retrieval – Retrieval models; H.3.4 Systems and Software – Performance evaluation (efficiency and effectiveness); H.3.7 Digital Libraries

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**Björg Brekke Sørskog
Stavanger, Norway**

TEACHING THE GOOGLE GENERATION A FOCUS ON TEACHING READING SKILLS

Intorduction

The Norwegian educational law from 1739, stated that every child had the right and the obligation to learn to read, and would not obtain any rights as a grown-up person if he/she failed. Reading was, in other words, considered important. Since then the importance of reading abilities has increased.

Traditionally reading has been associated with some kind of *paper*: books, newspapers, magazines. In schools reading has also been associated with learning.

During the last 10 – 15 years, the screen seems to have overtaken the printed page as the paradigm for reading.

Below I'll focus this paradigmatic shift: Who are the readers of the new millennium? What reading skills do they need? How do we teach them these skills?

The future's readers

I teach pupils in the age group 13 – 16. When entering my classroom, they feel they know how to read. They have cracked the reading code years ago, and are able to read a variety of texts, with different levels of understanding, at different speeds.

In their reading habits, and in their everyday skills, these youths differ from the ones I met 10 years ago. They represent the «Homo Zappiens», the «Digital Natives», or, as my title refers to, «The Google Generation».

What then makes them special?

These youths

- have interacted with screen technologies through their whole lives (TV, remote controls, personal computers, cell phones, iPods, MP3-players...), and they have never experienced a world without such technology
- are used to handling fragmented information (hypertexts)
- expect immediate access to enormous amounts of information

- look at multitasking as a natural way of life
- expect to be online everywhere and at any time
- communicate and cooperate in networks based on ad hoc needs
- believe they'll find all the information they need or want in digital sources
- prefer audio visual sources as compared to information printed on paper
- seems kind of hyperactive, with a rather short concentration span
- get impatient when only stimulated with written words

The Google Generation is digital. Can an analogous school teach them the reading skills they need?

Reading on screen

The digital technology has made reading become a dynamic, mobile and interactive process. The screen text is not constant like the printed text, and letters, words and sentences often convey only a part of the text's message. The text can't be fully understood without studying pictures, listening to its sound effects, watching its film scenes, graphics, animations... Reading on screen is, in other words, a complex process which challenges the reader's ability to combine information from different stimuli, while simultaneously being focused on one message.

My assertion is that we, teachers and/or educators need to widen our understanding of the term «reading ability». We have much knowledge about traditional reading; reading processes and reading methods. This knowledge is not outdated or irrelevant, but it is no longer enough. We therefore need to supplement our knowledge in order to help the Google Generation to become confident, efficient, and critical readers.

Screen texts:

Characteristics

«Screen texts have 3 characteristics: Multimodal, hyperstructured and interactive» (Mangen, Anne, 2009).

– **Multimodal:** The screen texts have more types (modes) of information than printed texts, and requires a form of reading where the reader is capable of quick readjustments: In a short span of time he/she switches from reading words, to looking at pictures, to listening and looking at short video sequences, to studying graphics to...

«Multimodal texts combine dynamic expressions (films, sounds) and static expressions (text, photos) to an extent and in ways that have been impossible in earlier technologies» (Mangen, Anne, 2009, my translation).

– **Hyperstructured** texts (hypertexts) are in fact networks, which invite the reader to navigate in multiple directions by mouse clicks. While printed texts are linear, with a defined beginning and end, each reader chooses his/her path through a hypertext which has no fixed beginning or end.

– **Interactive.** While printed texts don't change, interactive texts immediately respond to all kinds of actions. A reader's mouse click can make it change or disappear. The Google Generation expect interactivity, and quickly click away when finding websites that don't invite to, or allow them to interact.

Reading and reflection

Screen texts are not filtered or authenticated, and have no trustable quality labels. In itself this is a challenge because each reader needs to be able to evaluate the texts' relevance, information value and perhaps also the authenticity:

- Who wrote this text, and how can I find out if it's authentic?
- Whose interests are behind it, and to what purpose?
- Who is the text made for?
- From what perspective is it written?

- From what other points of view can this subject be seen/discussed?
- What attitudes, values and/or ideologies does it convey?
- How can the quality of this information be accessed?

«Over the past few years I've had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. My mind isn't going—so far as I can tell—but it's changing. I'm not thinking the way I used to think. I can feel it most strongly when I'm reading. Immersing myself in a book or a lengthy article used to be easy. My mind would get caught up in the narrative or the turns of the argument, and I'd spend hours strolling through long stretches of prose. That's rarely the case anymore. Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread, begin looking for something else to do. I feel as if I'm always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle». Journalist Nicholas Carr: «Is Google Making us Stupid» The Atlantic Monthly, July/August 2008. <http://www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/6868/>

It seems reasonable to assume that others have made similar experiences. The technological development doesn't appear to do much in ways of stimulating the slow, contemplative form of reading which invites reflections. If this is so: How will this influence our reading abilities, and, perhaps more important: Will it influence our way of thinking?

How do we teach the Google Generation?

The digital technology has developed so quickly that schools, as well as individual teachers, always seem to be running behind instead of leading learning processes.

The Google Generation come to school every day, and are met and thought by their teachers. The relevance of these teachings however, particularly regarding reading processes, may be questioned when seen in a perspective of 10 – 30 years from now.

Resources:

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