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Publication date

2009

Published in

Fostering communities of learners: digital book of abstracts

[Link to publication](#)

Citation for published version (APA):

Rijlaarsdam, G., van den Bergh, H., van Weijen, D., Janssen, T., Braaksma, M., & Tillema, M. (2009). Cognitive processes during writing processes and their relation with text quality. In G. Rijlaarsdam (Ed.), *Fostering communities of learners: digital book of abstracts* Graduate School for Teaching and Learning, UvA. <http://www.earli2009.org/bookofabstracts/start.html>

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SESSION

O 23 | 29 August 2009 | 08:30 - 10:00

room: Agora: Aernout Mik Room

Symposium

category: Writing

Writing process research 30 years on

participants

- Chairperson: David Galbraith, Staffordshire University, United Kingdom
- Organiser: David Galbraith, Staffordshire University, United Kingdom
- Organiser: Gert Rijlaarsdam, University of Amsterdam, Netherlands
- Discussant: John Hayes, Carnegie Mellon University, United States

The aim of this symposium is to honour John R Hayes' contribution to writing research, thirty years after he began the research which has had such a formative influence on the field. The Hayes and Flower (1980) model of writing and its more recent reconceptualisations (Hayes, 1996; Hayes and Nash, 1996) play a central role in theorising about writing, and the process approach to the teaching of writing inspired by his research (Hayes and Flower, 1986) has had a huge impact on education in many different countries. The contributors to the symposium will each consider a component of the model or a theme inspired by his research, and review how it relates to current research, drawing out the implications for theories of writing and educational practice. Galbraith will focus on the idea generation component of writing, reviewing research investigating how writers discover new ideas through writing, and then outline a dual process model of writing, which incorporates components of the original Hayes and Flower model, but which places greater emphasis on the knowledge-constituting function of text production. Rijlaarsdam and his colleagues will describe the results of their work using multi-level modelling of verbal protocols (first introduced to the field by Hayes) and will outline a dynamic conception of the processes involved and their contribution to text quality. Olive will focus on the concept of cognitive overload (a central theme in Hayes' early research) and review how it has been developed in terms of different models of working memory. Alves will focus on the affective component of writing, reviewing recent research on the health benefits of expressive writing and on the motivational factors influencing writing. The symposium will conclude with a response by Hayes and a discussion of the current state of writing process research and its educational implications.

Cognitive processes during writing processes and their relation with text quality

- author: Gert Rijlaarsdam, University of Amsterdam, Netherlands
- author: Huub van den Bergh, University of Amsterdam, Netherlands

- author: Daphne van Weijen, Utrecht University, Netherlands
- author: Tanja Janssen, University of Amsterdam, Netherlands
- author: Martine Braaksma, University of Amsterdam, Netherlands
- author: Marion Tillema, Utrecht University, Netherlands

We will present results from empirical studies as examples of how writing processes can be modelled along a time axis, as distributions of mental and physical activities over a certain period of time. Differences in such distributional characteristics vary between individuals, and are related to the quality of the produced text. We will show that the occurrence of cognitive processes varies during the writing process. In the beginning processes such as 'reading the assignment' and 'planning' are much more likely to occur, whereas during later phases in the writing process, 'generation of ideas', 'formulating' and 'revising' are more likely to occur. Differences between writers in the distribution of writing processes are related to differences in text quality. For instance, 'generating' is positively related to text quality only in the middle of the writing process; in the beginning and near the end the correlation between generating activities and text quality is negative. This indicates the importance of a monitor, which regulates the occurrence of cognitive processes.

Furthermore, we show that cognitive processes interact during the writing process. That is, combinations of cognitive processes such as 'rereading written text' and 'generating', or 'formulating' and 'generating' show distinct patterns of occurrence over time, and are related to text quality in different ways.

The occurrence of cognitive processes depends on characteristics of the assignment a writer carries out. That is, the distribution of a cognitive process during the writing process depends on the task at hand. However, the relation between cognitive processes and text quality remains remarkably stable between assignments. If writers write in a second language, the influence of assignments on the distribution of cognitive processes appears to decrease. However, the relations between distributional characteristics of cognitive processes and text quality seem to be relatively language independent.

Summary

In studies on cognitive processes during writing, we focus on four characteristics of the writing process. That is, we study the occurrence of cognitive processes during writing, their influence on text quality and the way task and learner variables influence the writing process and the relation with text quality.

For all cognitive processes such as, 'planning', 'generating ideas', 'formulating', 'evaluation' and 'revision', distinguished in the Flower and Hayes-model their appears to be a distinctive pattern of occurrence. Each cognitive process is more or less likely to occur at a certain stage in the writing process. For instance, in the beginning processes such as 'reading the assignment' and 'planning' are much more likely to occur, whereas during later phases in the writing process, 'generation of ideas', 'formulating' and 'revising' are more likely to occur.

Writers differ in their distributional patterns of cognitive processes during writing. These differences in distribution appear to be related to text quality. Therefore, the relevant question is when writers plan while writing, rather than how often they do so. For example, planning appears to only be related to text quality in the initial phases of the writing process. Another cognitive process such as 'generating' is only positively related to text quality in the middle of the writing process. Writers who generate ideas

too early or too late are likely to write (relatively) poor texts. This suggests that there is an underlying mechanism which regulates when a cognitive process is carried out. Hence, the monitor is assumed to have a large impact on the occurrence of cognitive processes and thus also on text quality. Most studies to date, have focused on the occurrence of cognitive processes in isolation, instead of examining the interaction between them. It has been shown, however, that certain cognitive processes influence each other, and that such combinations appear to have an affect on text quality. For instance, generating ideas can be preceded by reading the assignment or reading the text-produced-so-far. The former combination of processes is only positively related to text quality in the beginning of the writing process, while the latter is negatively related to text quality in the beginning, but positively in later phases of the writing process. Writers must have a mechanism which keeps record of the occurrence of combinations of cognitive processes and determines when such combinations should be carried out. This suggests, once again, the importance of a monitor for the writing process. Research has shown that the occurrence of cognitive processes depends on characteristics of the assignment a writer carries out. That is, the distribution of a cognitive process during the writing process depends on the task at hand. A writer can start generating ideas much quicker in one task than during another task. However, the relation between cognitive processes and text quality remains remarkably stable between assignments. One of the most frequently studied task characteristics is the language in which the assignment has to be carried out. This seems to influence the distributional pattern of cognitive processes during the writing process. If writers write in a second language, the influence of assignments on the distribution of cognitive processes appears to decrease. In other words, in a second language the distributional patterns of a cognitive process are much more similar between tasks. Nevertheless, there is a striking similarity between the distributional characteristics of cognitive processes and text quality across languages. Thus, process-product relations appear to be relatively language independent. Finally, writer characteristics appear to influence the distribution of cognitive processes as well. For instance, good revisors tend to delay revisions until later phases in the writing process. Writers with high vocabulary knowledge in L2 tend to organize their writing process in a different way than writers with low vocabulary knowledge. To sum up, the orchestration of cognitive processes during writing varies from writer to writer. These differences in orchestration are related to the quality of the produced texts. Part of these differences can be explained by task characteristics and/or learner characteristics.

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