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The deconstruction of the scientific article

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Schedule

- Background
- Research questions
- Related research
- Method
- Future/Conclusion
- Literature



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What Do You Do with a Million Books?

(Crane, Gregory)



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What Do You Do with
much more than a Mil-
lion scientific articles?



Background

- permanent growth of information
- 28 ' 100 peer reviewed journals
- 1,7 - 1,8 Mio scientific articles per year

(Ware et al. 2012)



- Source: Yoffe (2009)



What is the point of having countless books and libraries whose titles the owner could scarcely read through in his whole lifetime?

(Seneca, L.A.)



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Future Vision to cope
with this huge amount?



In the new world of books,
every bit informs another; every
page reads all the other pages.

(Kelly, Kevin)



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The end of the document

(Gradmann, Stefan)



Research Question(s)

How can we structure (write) a scientific article to ensure an optimized reading (process)?



Research Question(s)

- Granularity of the scientific article
- IMRD (Introduction - Method - Result - Discussion) - other possibilities/other templates?
- Information behaviour of the „Net Generation“?



Related Research

- Information Retrieval (sophisticated search and retrieval mechanism)
- Text Mining



Related Research

- semantic publishing, interactive elements, Web 3.0 (Shotton 2012)

Contradiction:

- Hyperreading - Hyperlinks



Each link presents an opportunity for exploration, and is, in a very palpable sense, similar to the ringing of a telephone... 'centrifugal' force, trying to tear the reader away from the inertia of the text, and on into another space.

(Pesce, Mark)



Related Research

Document structure

- la représentation d'une vérité partagée au-delà du chaos (Pédaque 2007)
- de-konstruiertes Informationskontinuum (Gradmann 2007)



Related Research

Document structure

- SARA - signal available relevant accessible information (Lemarié et al. 2008)
- QuikScan (Meij et al. 2012)



Diagnosis and resolution structure

- 12} Troubleshooting Procedures lead users through (brief or lengthy) phases of diagnosis and resolution activity.
- 13} Important distinction: One or more methods comprising a distinct approach to solving a problem can be regarded as a solution path.
- 14} The diagnosis phase may contain steps for resolution, and the resolution content may include diagnosis steps.

{12} Almost all troubleshooting procedures lead the user through phases of diagnosis activity and resolution activity. Either phase can be brief (sometimes very brief) or lengthy. The diagnosis phase may consist of a single symptom or a complex configuration of symptoms. The resolution phase may consist of a single method (a set of steps to take) or many methods in a complex configuration.

{13} One important distinction is that one or more methods comprising a distinct approach to solving a problem can be regarded as a solution path.

Although the main structural pattern is diagnosis followed by resolution, {14} at times the diagnosis phase may contain steps for resolution and the resolution content may include diagnosis steps.



Related Research

Conclusion:

- latest research considers only a text as a whole
- there is no research in the granularity of a text



Research topic - aim

Relationship between

- document structure
- structure of thought
- interdisciplinary view:
„neuro information science“



Method

- Brain sensing
(brain measures as an additional channel to information filtering systems) (Peck et al. 2013)
- functional magnetic resonance imaging (fMRI) (Ferebee 2011)
- [Eyetracking]



Method

?

The great question



Future research/conclusion

- resolving the contradiction
„semantic publishing“ -
„enhancement“ - Hyperreading



Future research/conclusion

- to reduce complexity
- added value for the reader („with less text he/she can get more“)



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