RESOLV: Readers' Representation of Reading Contexts and Tasks

The present study introduces reading as problem SOLVing (RESOLV), a theoretical model to account for readers' construction and management of goals during text comprehension and use. The data supports the view that reading decisions and processes are guided by readers' perceptions and attributions regarding the task statement as well as more implicit cues from the reading context.

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The present study introduces RESOLV, a theoretical model to account for readers' construction and management of goals during text comprehension and use. Using RESOLV, it is assumed that readers construct two types of mental models prior to reading: the context model and the task model. First, the RESOLV model is represented and two core hypotheses are articulated. Then, evidence supporting these hypotheses is presented and discussed. The data supports the view that reading decisions and processes are guided by readers'

perceptions and attributions regarding the task statement as well as more implicit cues from the reading context.

- In contemporary societies, reading serves an increasing range of goals and purposes.
- Effectively selecting and making use of multiple sources of information requires a set of advanced literacy skills that extend beyond word decoding and passage comprehension.
- Skilled reading—particularly applied to multiple sources and functional contexts—involves the ability to decide what to read and how to read it.
- Reading always takes place in a context that motivates readers' engagement with text.
- What readers read and how they read it depends on the reason why they read and the way they intend to use the information.
- When readers read multiple sources, their decisions depend on their initial representation of contextual demands and opportunities, which we refer to as a context model.
- Readers' context models are based on the selection and prioritisation of selected cues from the context, which readers can then turn into a set of initial goals and actions: a task model.

The role of goals and standards in reading

- Readers may independently establish their own reading goals; however, goals often result from the readers' interactions with their physical and social environment.
- Readers' memory for text varies as a function of the perspective they are assigned at the time of reading.
- The purposeful nature of reading is even more apparent in situations involving the use of texts to answer specific questions or prompts.
- Mature readers are able to describe the strategies and actions that match the demands of specific situations,

based on several dimensions and features of the situations.

Standards of coherence theory

- Comprehending a text means constructing a coherent mental representation of the situation described in the text.
- This requires the readers to engage in a complex process of connecting the contents at more and more local levels, and generating the inferences needed to establish and maintain coherence.
- Standards determine whether the reader feels that comprehension is complete or that additional inferential processes are required.
- Competent readers adopt standards that meet the demands of the reading context and task.

The COPES model

- Conditions, operations, products, evaluations, and standards (COPES) are core dimensions of learning tasks.
- The model is a four-phase process model of studying, which includes task definition, goal setting and planning, enacting study tactics and strategies, and metacognitively adapting studying.
- Within the model, it is important to recognise students' perceptions and inferences regarding assigned study tasks.

Defining the RESOLV model

Assumptions

- It is assumed that reading behaviour is adaptive and

serves purposes that the individual deems valuable enough to warrant the investment of significant cognitive resources.

- It is acknowledged that human processing resources are limited, placing constraints on the organisation and sequencing of the reading activity; readers will optimise the amount of text information to be processed and the depth of processing as a function of cost–benefit analysis.
- It is assumed that readers perform 'feeling of knowing evaluations' (FOKE) prior to and during reading.
- Readers evaluate the physical, cognitive, and emotional cost relative to the benefits of reading actions with respect to achieving their goals (the cost–benefit assumption).
- Decisions to use specific reading actions correspond to an activation level and a threshold value.

Overview

- Reading takes places within a physical and social context that sets conditions and resources for reading.
- The model provides specific mechanisms to explain how readers construct a representation of the reading task, including constraints such as time, stakes, and cost–benefit ratio.
- The context includes the request, the requester, the audience, support and obstacles, and readers' assessment of themselves as cognitive and social agents.
- Readers' personal resources include pre-existing context schemata, knowledge of reading tasks and strategies to address them, self-regulation skills, and the skills and knowledge required to decode and comprehend written texts.
- To participate in reading, three types of constructs are necessary: a context model, a task model, and reading processes and outcomes.

- Readers' initially form a mental model of the physical and social context.
- Based on their context model, the reader builds a task model defined as a representation of the end goal and a set of means that can be used for achieving that goal.
- Reading activity is seen as a sequence of processes, decisions, and actions that are selected through cost–benefit analysis in the service of reader-generated goals.
- Reading results in outcomes that are used to engage in self-regulation mechanisms such as moving along a goal structure, making different decisions or engaging in different actions, redefining the task for one-self, or even reconsidering the context.
- Self-regulation decisions are closely related to readers' FOKE as well as their cost–benefit analysis and decision thresholds.

Context model

- The context model includes subjective representation of the physical and social situation that precedes and surrounds any reading experience.
- Reading is always motivated by some kind of need.
- Readers' processing of contextual features always play a part in their engagement with text.
- Readers vary in the type of cues they attend to or focus on in a given reading context, and how they interpret those cues.
- Context models are defined as a type of mental model: representations that people construct about their environment, the objects they interact with, and themselves.
- Construction of a context model is typically achieved through two core processes: feature extraction and recognition and instantiation of a pre-existing schema.

Task model

- The task model includes subjective representation of the goal to be achieved and the means available to achieve it.
- Task model processes involve selecting prominent cues from the context model, interpreting the request, setting and updating goals/plans, and detecting and handling obstacles and impasses.
- Goal setting operates on a subset of contextual cues that have been foregrounded through deliberate or incidental selection.
- Reading goals in turn fuel readers' decisions and actions regarding what to read and how to read it. Understanding of a desirable outcome also informs the calibration of a processing level.
- Task models are not very detailed or elaborated; rather, the initial goal representation gets updated as a function of reading outcomes.

**Hypotheses derived from the RESOLV model**

- Readers base their reading decisions on their interpretation of task demands (the task model hypothesis)
- Readers represent contextual cues beyond the task statement itself (the context model hypothesis)

Empirical evidence for the hypotheses

- Experienced readers can make detailed decisions about what to read or to skip in a text as a function of their interpretation of the task demands.
- Students actively control their intake of information as a function of their understanding of the task demands; however, there are substantial individual differences within this.
- Comprehension skill, domain knowledge, and other factors can mediate the relationship between the task and

reading processes.

- Readers' developing awareness of the structure and affordance of texts also impact their task models, as indicated by the strategies they use to address the question.
- The most efficient information searchers spend more time studying a table of contents or an index, rather than searching through content pages.
- Readers make decisions regarding what to read and how to read it based on their reading goals and means available to achieve these goals; that is, their task model.
- There is evidence that students take into account contextual dimensions such as the subject matter and the type of source when establishing monitoring standards for themselves.
- There is initial evidence that readers construct a representation of both explicit and implicit elements of the context and that what they encode about the situation can influence reading actions when holding the specific task instructions constant.
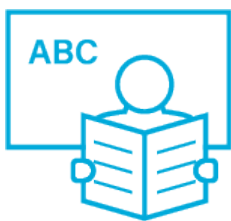
Summary

- Compared to prior frameworks, RESOLV emphasises the role of explicit and implicit contextual cues as well as readers' prior experiences with similar contexts.
- The RESOLV model is based on the assumption that readers form a task model based on their context model; that is, an interpretation of the task instructions and other relevant cues of the reading environment.
- Readers' task models are the result of their

interpretation of contextual demands, which may vary as a function of readers' perceptions of communication partners' authority, likelihood of success, effort, and stakes.
- Within the RESOLV model, reading is considered a sequence of decisions that are made based on the reader's cost–benefit analysis.