

01 Context

Long-form reading fosters comprehension, critical thinking, and empathy but demands sustained attention, making interruptions both common and disruptive. These breaks hinder understanding, delay progress, and diminish the reading experience. While existing work has sought to reduce such effects, advances in AI open opportunities for personalized, dynamic support. Yet, research remains sparse, with only early evidence suggesting AI's promise and reader acceptance.

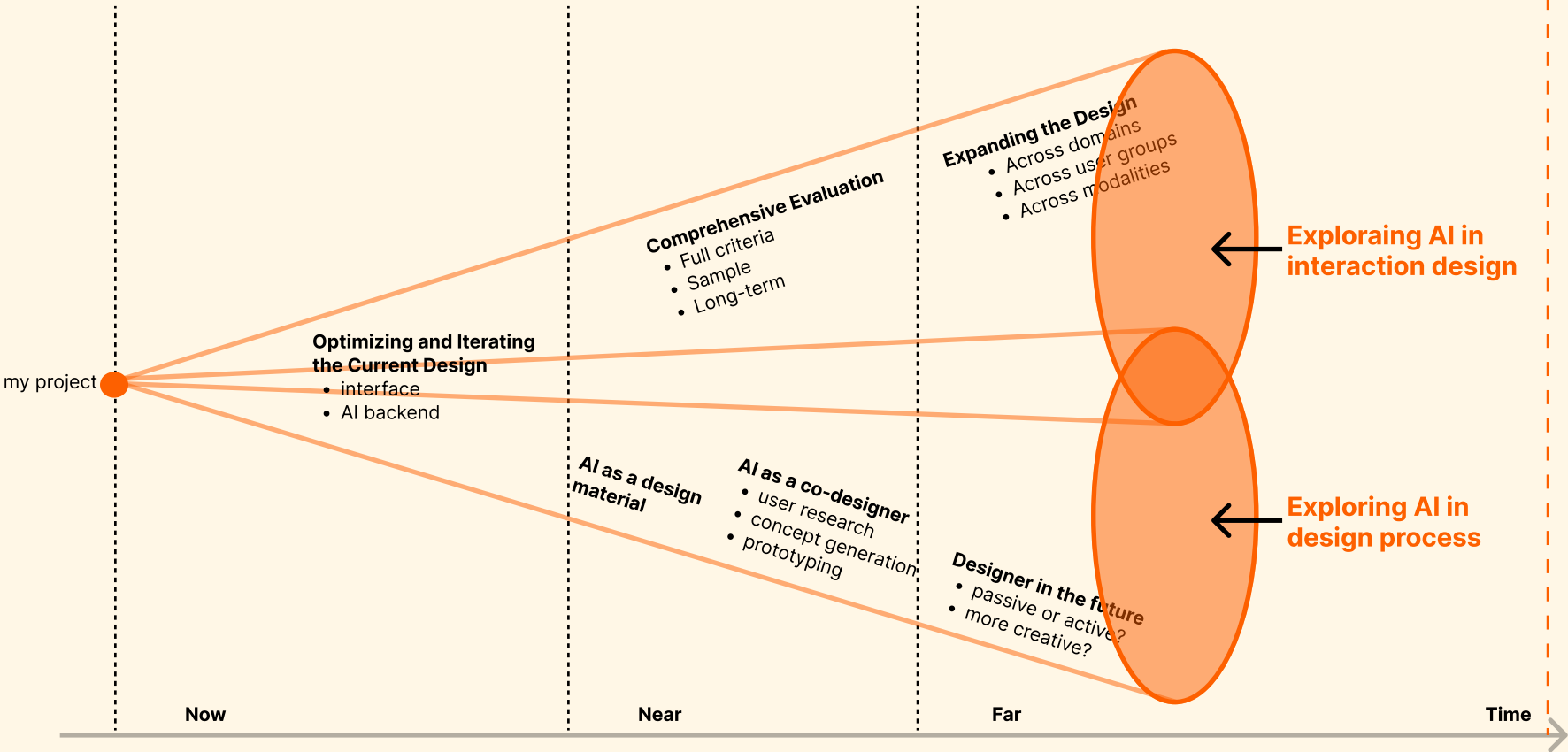
02 Research Question

How can we design interactions that leverage AI to better support readers in managing interruptions during long-form reading?

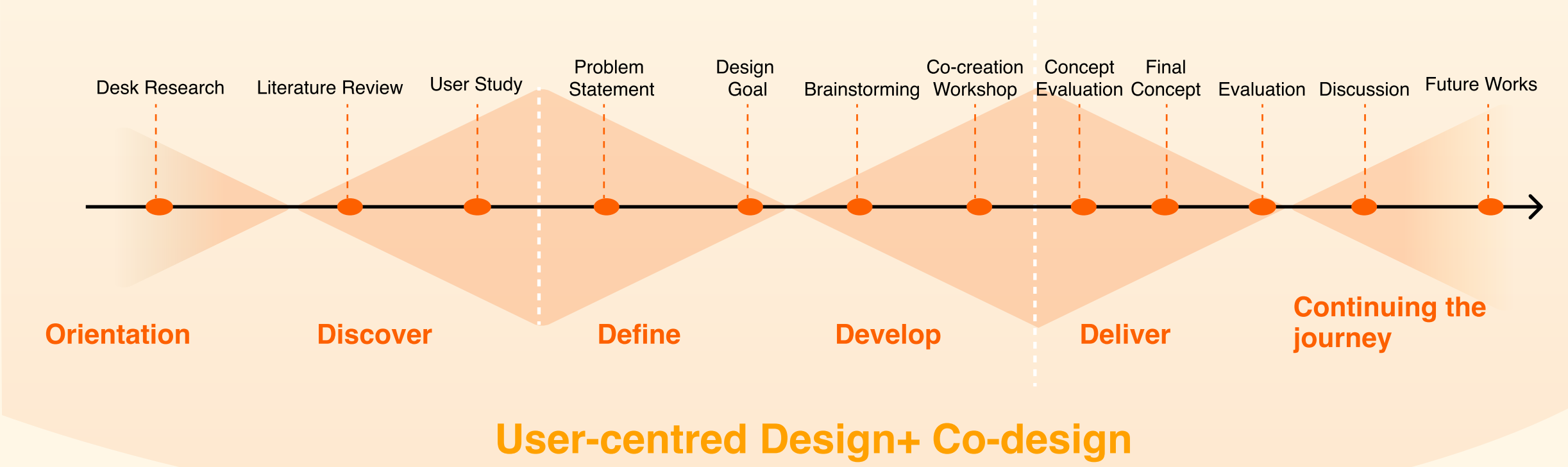
PaperCast

Exploring AI-powered interaction for re-entering long-form reading

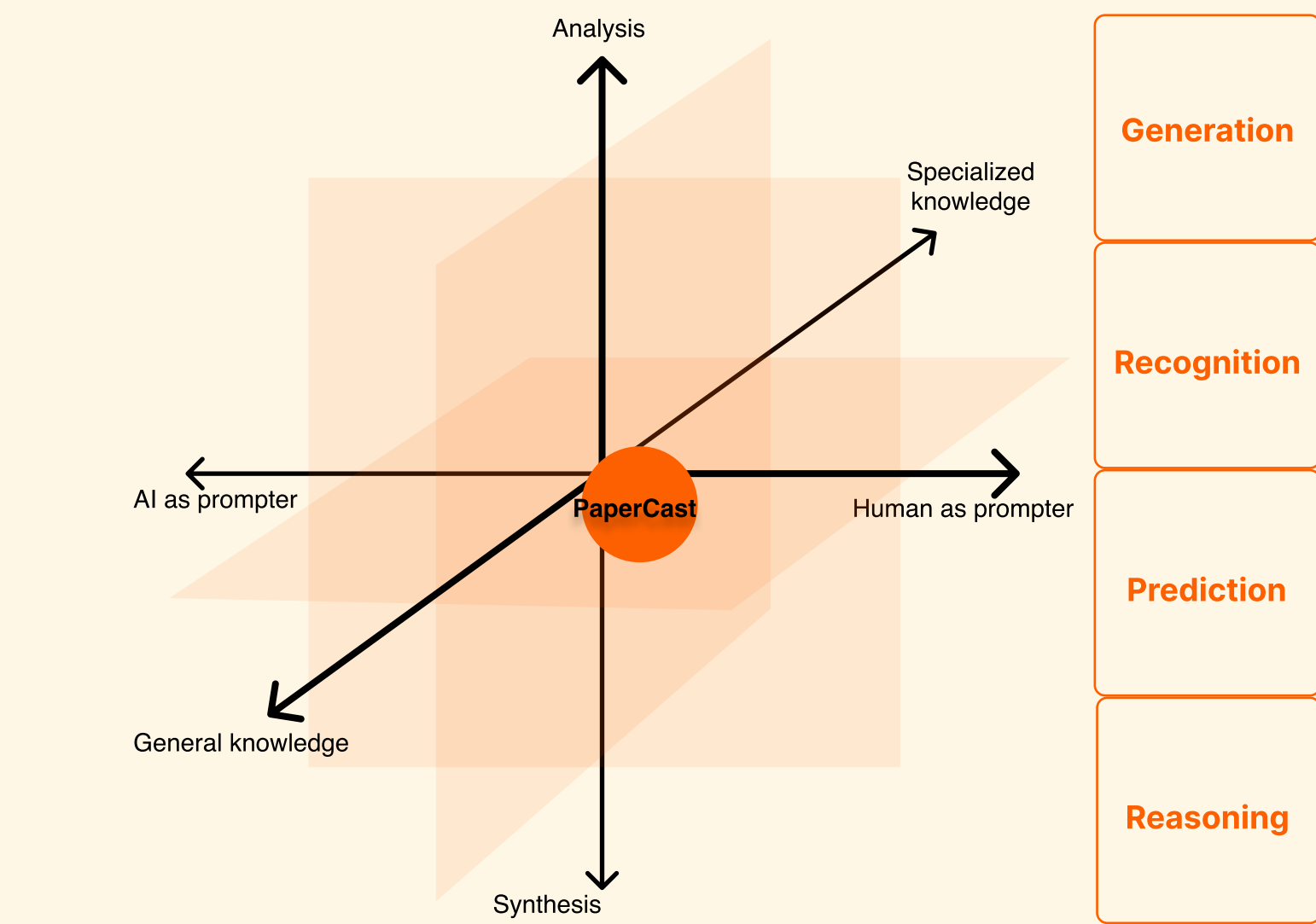
08 Future work



03 Approach



06 AI as a consultant in design



07 Design Recommendations

Layered Information: Balancing Accessibility and Overload

In scientific paper reading, accessible AI-generated information is essential for user trust, yet excessive detail risks overload. A layered approach—presenting key insights upfront while keeping secondary details on demand—helps balance usability with trust.

Seamless Switching Across Modalities

The podcast adds an auditory channel to visual reading, so smooth transitions—like visual resumption cues—are essential. This lets users switch easily between listening and reading while reducing friction.

Shift from Passive to Active Interaction

The AI-generated podcast lets users move from passive listening to active engagement. Asking questions or joining discussions in real time supports learning and creates a stronger sense of support and also boosts comprehension.

User-Need-Based Input Customization

Tailoring inputting interface to readers' background, goals, or proficiency simplifies setup and makes AI outputs more stable and predictable, ensuring a consistent user experience.

04 Design Outcome

The Future of Artificial Intelligence

A comprehensive exploration of AI's impact on society and technology

Paragraph 1: Artificial intelligence has emerged as one of the most transformative technologies of our time, fundamentally reshaping how we interact with digital systems and process information. From machine learning algorithms that power recommendation systems to sophisticated neural networks capable of generating human-like text, AI's influence permeates virtually every aspect of modern life.

Paragraph 2: The rapid advancement of AI technologies has sparked both excitement and concern among researchers, policymakers, and the general public. While AI promises unprecedented opportunities for innovation in healthcare, education, and scientific research, it also raises important questions about privacy, employment, and the ethical implications of automated decision-making systems.

Paragraph 3: Machine learning, a subset of AI, has proven particularly effective in pattern recognition and predictive analytics. These capabilities have revolutionized industries ranging from finance and marketing to autonomous vehicles and medical diagnosis. The ability of AI systems to process vast amounts of data and identify complex patterns that might escape human observation has opened new frontiers in scientific discovery and business intelligence.

Paragraph 4: Natural Language Processing represents another significant breakthrough in AI development. Modern language models can understand context, generate coherent responses, and even engage in creative writing tasks. This advancement has enabled the creation of sophisticated chatbots, automated translation services, and content generation tools that blur the line between human and machine-generated text.

Generate Podcast

Select any sentence from the text to start generating

Generate

Dr. Sarah Chen (AI Host), Dr. Michael Zhang (AI-generated Host), You (Participant)

"When we talk about automated decision-making, we're referring to AI systems that can make choices without human intervention."

Speaker View, Transcript View, 0:12 / 10:30

Join Discussion, A Speaking [HH]

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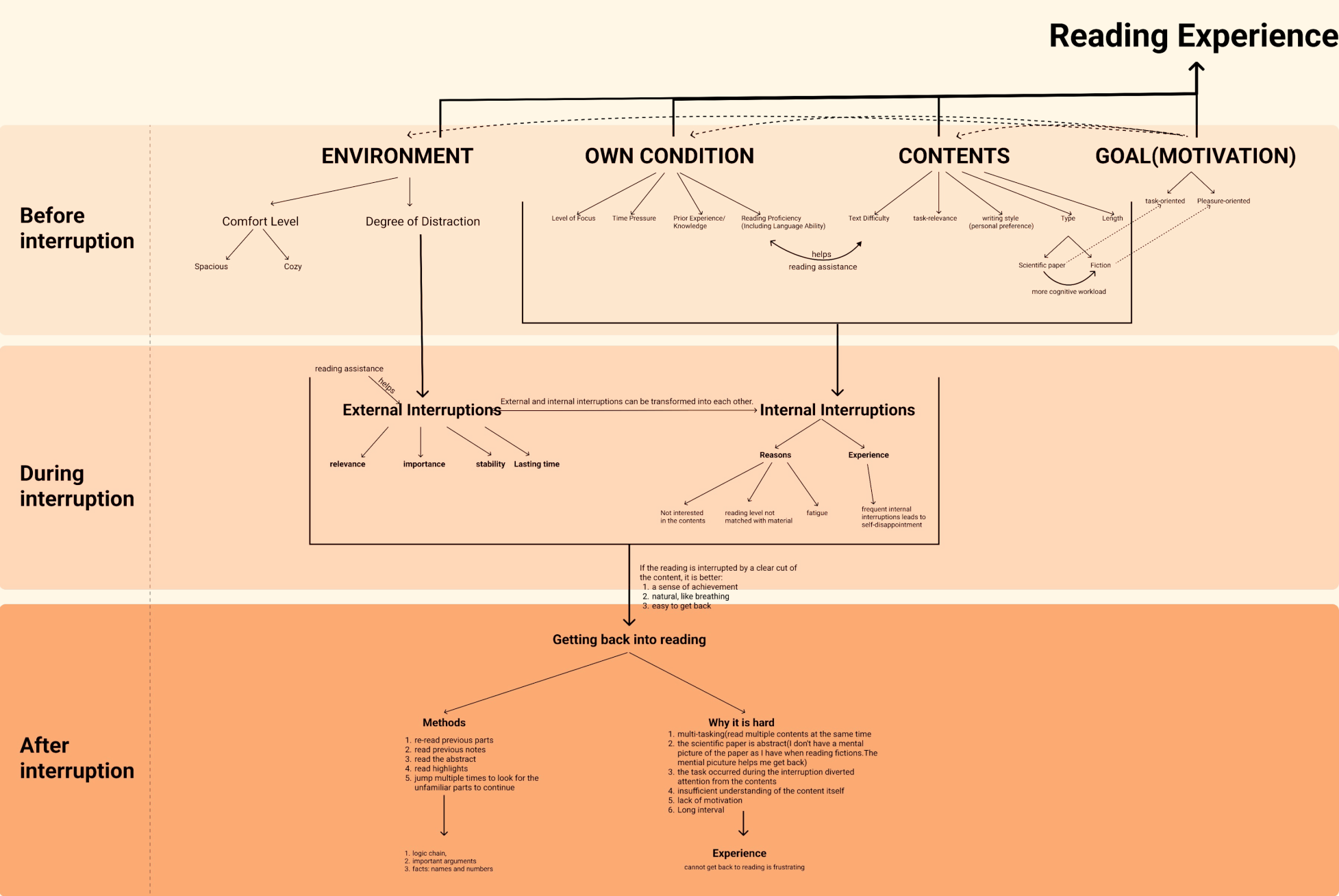
Join Discussion, A Speaking [HH]

High-fidelity, Low-fidelity, Interaction flow, Storyboard, Final Concept

Key Features

- 01 Listen To & Join The Podcast With Speech/ Text
- 02 Content Custermization With User's Context
- 03 Visual Resumption Cue

05 Research Insights



Yonghao Hu
Building interaction for Getting back into reading
7th September 2025
Design for Interaction

Committee
Dr. rer. nat. Tilman Dingler
Dr. rer. nat. Christina Schneegass

