

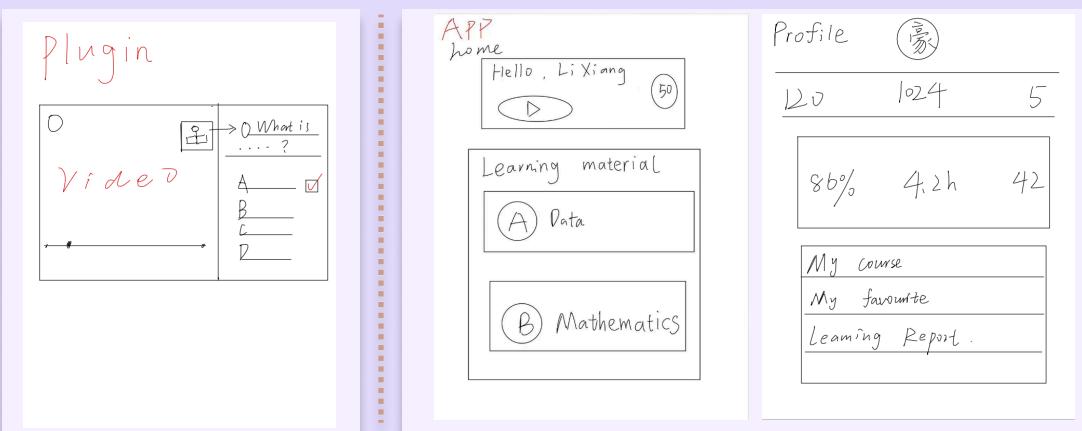
VidTailor: Your Personalized AI Video Tutor

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Iteration I ◇

In our first iteration, we explored the foundational elements of VidTailor, focusing on establishing a personalized video learning experience. This iteration directly responds to our primary requirement of "Personalized Video Learning" - where users need customized practice questions based on video content and their viewing behavior, complemented by recommendations for relevant video resources. The focus of this iteration was creating a streamlined yet comprehensive functional sketch.



Evaluation

Achievements:

Created a sketch that implements the core quiz functionality.

Limitations:

Despite VidTailor has implemented question generation based on video content, the most significant finding from our questionnaire —the need for more powerful "review tools" to help users retain and organize information—has yet to be addressed.

Iteration II ◇

In our second iteration, we implemented significant improvements addressing the key limitations identified in our first evaluation, focusing on developing the "Systematic Review and Knowledge Organization Based on Video" functionality. This iteration directly responds to users' needs for AI-driven review tools, elevating the learning experience from simply watching video content to knowledge construction and consolidation.

Plugin 📱

Mistake Book: Any incorrect question has a corresponding video link.

Knowledge Map: Each individual video topic will link to relevant video topics.

AI Notes: Generate corresponding notes for the knowledge points based on the incorrect questions and video content.

Evaluation

Achievements:

Implemented a comprehensive three-in-one review system (mistake notebook, AI notes, knowledge mapping) for effective knowledge consolidation.

Limitations:

Despite VidTailor progress in review tools, our questionnaire revealed that students strongly desire peer learning and community interaction features. Currently, students cannot discuss video content or share insights about difficult concepts, causing them to miss valuable learning opportunities that come from collective knowledge - a capability they've explicitly requested.

Iteration III 📂

In our third iteration, we focused on resolving the key limitations identified in the previous evaluation, successfully implementing the "Peer Interaction and Collaborative Learning Based on Video" functionality, and made an important platform strategy adjustment—shifting from the originally planned plugin+App dual-mode to a plugin+Web mode. Survey research indicates that college students prefer using browser environments for online learning rather than downloading standalone applications.

Plugin 📱

The user chooses to practice, and VidTailor presents related question.

VidTailor checks the answer and gives helpful hints or corrections.

VidTailor provides AI-powered explanations to answer any follow-up questions.

Web 🌐

AI-powered mistake book and study notes.

Learning platform and smart group chat connect students with similar questions.

Evaluation

Achievements:

- Established an active learning community framework, making knowledge transfer no longer limited to one-way flow from system to user.
- Transform Platform from App to Web, as students strongly preferred browser-based video learning environments based on questionnaire.

Future work:

We will focus on enhancing data security and user consent mechanisms to protect student data while maintaining collaborative features.

Overall Evaluation

Achievements:

The first introduced personalized quiz delivery, the second enhanced knowledge system with a comprehensive Review Framework, and the third fostered peer engagement via a web-based Community learning Ecosystem.

Limitations:

Despite progress, several limitations were identified. In the first iteration, personalized quiz delivery was effective, but users wanted more advanced and efficient review tools. The second iteration improved systematic review features but lacked peer learning and community interaction. The third iteration faced challenges of data privacy as social learning features were introduced, requiring better data-security controls.