# QuizNote Connect

Second Brain Application

**Start Presentation** 



### **Team Introduction**











#### Jonathan Silk

Jonathan is a U.S. Army
Veteran with additional
professional experience in
healthcare, higher education,
and organizational
development. This project is
important to him because it
can help learners learn better.

#### Michele Norton Silk

Michele does narrative research, team development and design thinking with organizations. This project is important to her because she believes in technology that helps students learn.

#### Sarah Hartman

Sarah is an educator of fourteen years with a background in art and art history. She is also a perpetual student. This project is important to her to help her and her students study more efficiently.

#### **Brian Chavez**

Brian, a seasoned educator with a background in Interior Design and Event Planning, has devoted 17 years to education. This project is important to him as it aims to enhance study and organization habits for educators and students.

#### Christina Ramirez

Christina is an educator of twenty-two years with a focus in gifted education. This project is important to her because effective note-taking and study skills are essential for academic success.



Problem Statement- Our Version

**Design Challenge** 

How might we improve teaching and learning through the combination of a note taking application and Al features?





#### Market

# **Business Opportunity**

The ed tech industry is exploding and is ripe for opportunity to combine Al capabilities that will improve student learning and teacher effectiveness. Note taking is critical to success in most secondary and higher education environments. We are aiming for educational-level contracts with school districts and universities.

- Potential Impact: Based on research, we want to understand the potential strategies for using note taking applications in a way that increases learning and performance.
- Limitations: We want to understand teacher and learner perspectives on the potential limitations on note taking applications to support learning and higher performance.
- Pain Points: We want to know the pain points that note taking applications users have when utilizing them in the educational context.









#### **User Research**

### Research Objective

The purpose of the research is to understand how users (teachers and learners) utilize note taking applications in the educational context, exploring how note taking applications could help improve the teaching and learning experience and the performance on learning outcomes.

Uncover the current note taking applications teachers and learners use and the benefits the application provides

Understand how users could better utilize note taking applications to increase learning and performance Understand perceptions on potential AI interactions with notes that could improve learning

https://miro.com/app/board/uXjVKfv567k=/

This link is to our whiteboard that captures our research data and process

#### **User Research**

### Research Methodology

We took a 3 step approach to uncovering insights about user experience research. We started first with open-ended interviews with students and teachers to uncover their perspectives on note-taking applications. We utilized insights from this step to conduct secondary research on note taking and academic performance and AI features that support learning. From there, we conducted our survey.

Conduct open-ended interviews with both teachers and students to uncover what applications they use, what they like, and what change/add

on potential uses of note taking apps that support learning and Al features that support learning

Conduct a survey of 100 educators and 100 learners to understand their perceptions on potential AI interactions that could improve learning



### Step 1: Interview Research

### **Interview Questions:**

- What note taking applications do you use?
- What do you like about it?
- In a perfect world, what would you want to change/add?

Insights into our Thinking: We wanted to stay broad for this exploratory interview phase to uncover patterns across what users mention and do not mention. We planned to use these insights to dig deeper into secondary research and to create the survey. More details on our Miro Board.



#### **Interview Data**

### Table Stakes- must have

offline access	integrate with calendar	scan handwritten and convert
access across devices	voice to text, text to voice	embed video/image
translations for ELL learners	searchability	recently deleted files
grammar check	edit history	embedded dictionary
collaborative	camera accessibility	security

Insights into our Thinking: It became evident in the interviews that there are certain features that are expected by users- these would not be reasons for users to switch apps unless we did them dramatically better than the current apps they have access to.



#### Interview Data

# Wish Lists for Note Taking Application

switch platforms more easily	custom toolbox (highlighter, color-coded, stickers, post-its, calculator)	teacher can send out notes to student to add to
template access, template creation	Multimedia-audio, video, memes	show them what they should have highlighted- real time feedback send to computer
sketch/draw	help to know when/what to study	share teacher version for comparison
handwriting and typing	personalized feedback on how to improve	screen recording- captures how to do or what they did
endless canvas	Al suggestions to summarize	more robust search options
shape teaching to support effective note-taking skill development for students layers	Al turn notes into songs, pictures, flashcards, other study aides	messaging/comment interaction- teaching controlled

Insights into our Thinking: We utilized this data plus the secondary research data to build out our survey.



### Step 2: Secondary Research- How might note taking better support learning?

## Note taking, Feedback and Learning

Learners are **less likely to be distracted when taking notes on tablet** than computer.

Note-taking and Handouts in The Digital Age

- Lecture **cues boost note taking** and boosting note taking raises achievement.

  Spoken organizational lecture cues and student note taking as facilitators of student learning
- Educators establish their own philosophies on handouts and note-taking, but a **new** student-centered approach that provides learners with the best and most efficient way of learning.

Note-taking and Handouts in the Digital Age

record it in their notes. Students fail to
record up to 40% of the important points.

Research on Student Note Taking: Implications for Equality and

Research on Student Note Taking: Implications for Faculty and <u>Graduate Student Instructors</u>

Research from Stanford found that the existing method for personalized feedback requires significant resources.

Stanford

Research from MIT found that targeted, communicating progress, timely, and having the opportunity to practice and implement the feedback are 4 ways feedback supports learning

MIT



### Step 2: Secondary Research- ChatGpT Search Highlights

## Al and Note taking, Feedback and Learning

Prompt: How can Artificial Intelligence (AI) help students be better note takers?

- Enhanced Accuracy and Completeness
- Identifying Key Points and Summarization
- Improved Organization and Search
- Personalized Learning Support
- Collaborative Learning

Prompt: How can AI provide immediate feedback to students on the notes they are taking to help them learn how to take better notes?

- Identifying Missing Information
- Flagging Unclear or Unorganized Notes
- Highlighting Redundancy
- Encouraging Active Learning
  - Here is how this immediate feedback might be delivered
    - Discreet Pop=Ups
    - Post-lecture Summary
    - Adaptive Learning

Prompt: How could AI take notes and turn them into a different media that would help students interact with the content in a different way?

- Interactive Mind Maps
- Personalized Quizzes
- Educational Videos or Animation
- Gamified Learning Experiences
- Personalized Flashcards

Prompt: How could AI help teachers get instant information on students that are struggling to take digital notes in class?

- Identify At-Risk Students- limited note volume, lack of structure, verbatim copying
- Providing Actionable Insights- targeted feedback, differentiated instruction, small group support

Prompt: Create a 15 question survey about education-based note taking applications

• We used these as a starting point for creating the survey



### Survey Research

# Insights into our Thinking: It became evident we needed to get both the educator and student perspective to more fully understand the gaps and market opportunity available to us.

# **Survey Questions**

Educator Survey	Student Survey
Qualifying Question: Are you an educator for students 16 years and older?	Qualifying Question: Are you currently a student?
Demographic Questions: How many years of teaching experience do you have? What grade level students do you teach? What subjects do you teach?	Demographic Question: what level are you currently enrolled in as a student?
What methods do your students primarily use for taking notes in class?	What methods do you primarily use for taking notes in class?
On a scale of 1-5, how would you rate your students current note-taking skills?	On a scale of 1-5, how would you rate your current note-taking skills?
On a scale of 1-4, how confident are you in teaching your students effective note-taking strategies that will improve their performance?	On a scale of 1-5, how would you rate the effectiveness of teachers at helping you build strong note-taking skills?
	How did you primarily develop your note-taking skills?



### Survey Research

## **Survey Questions-continued**

Insights into our Thinking: We mirrored questions when it made sense and adding additional questions for the response group if we needed more insights into their perspectives. We used insights from the interviews and secondary research for the features in the ranking questions.

Educator Survey- cont.	Student Survey- cont.		
What 3 <b>features</b> do you consider <b>essential</b> in an education-based note-taking application?	What 3 <b>features</b> do you consider <b>essential</b> in an education-based note-taking application?		
Rank these features from a most critical need to a least <b>critical need</b> for a note taking app.	Rank these features from a most critical need to a least <b>critical need</b> for a note taking app.		
Rank these potential AI features from most impactful to least <b>impactful</b> for student learning.	Rank these potential AI features from most impactful to least <b>impactful</b> for your learning.		
Rank these AI feedback features that would help students <b>develop stronger note-taking skills</b> from most useful to least useful.	Rank these AI feedback features that would help you <b>develop stronger note-taking skills</b> from most useful to least useful.		
Rank these interactive options from most helpful to least helpful at improving student outcomes.	Rank these interactive options from most helpful to least helpful at improving your performance in class.		

Links to Survey Data:

<u>Educator Data</u>

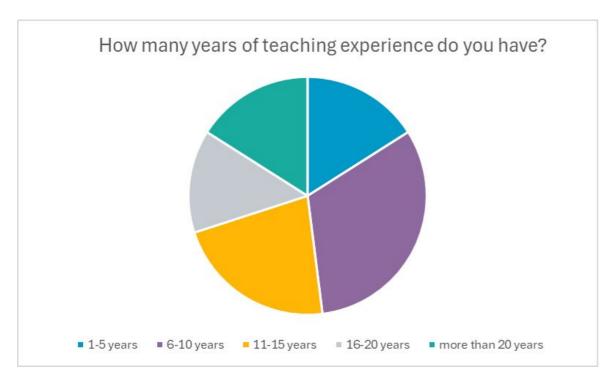
<u>Student Data</u>

**MIRO** 

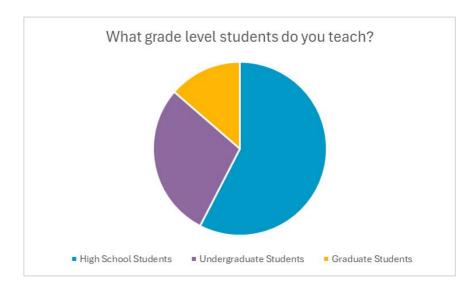


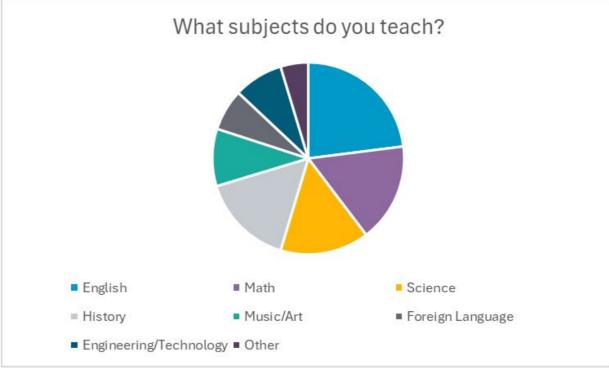
### **Survey Participants**

100 Educators



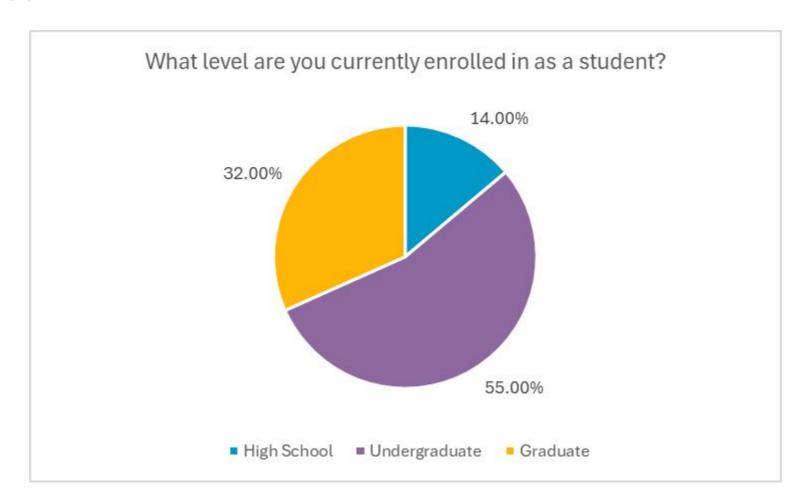
Insights into our Thinking: We focused on high school and higher education educators and students because that would be the first market we target.





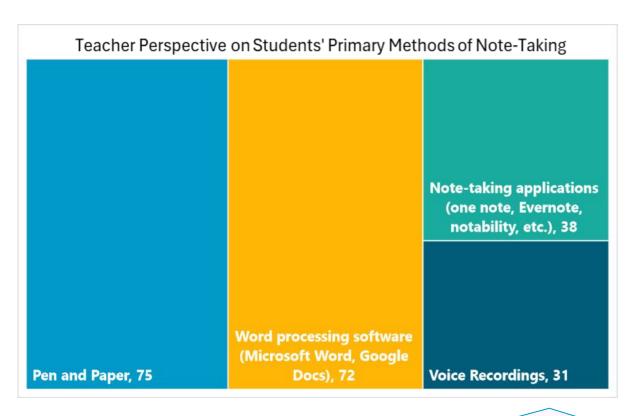
# **Survey Participants**

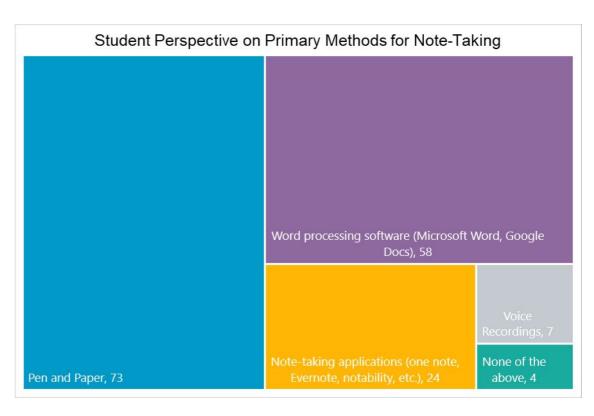
100 Learners





## Perspectives on methods of note taking

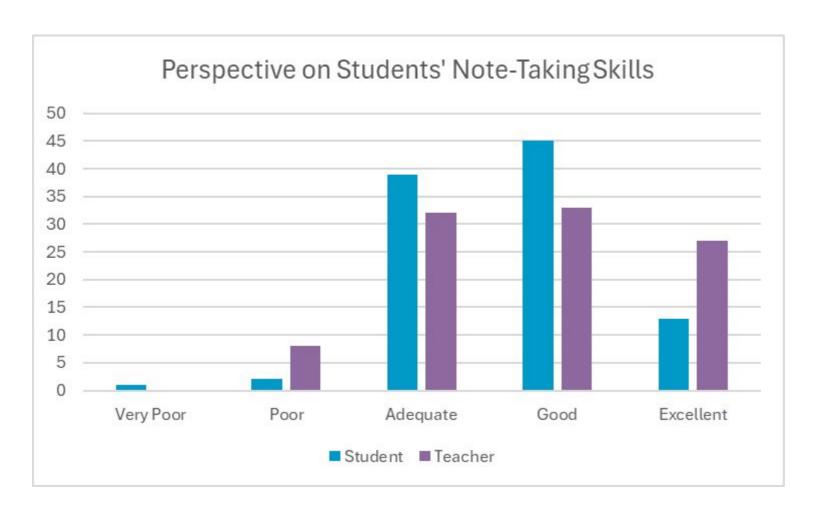




Insights into our Thinking: Many students are still using pen and paper for notes or basic word processing applications. Our solution would need to meet students where they are currently taking notes. For example-handwritten notes that convert to text, maybe an add-on application to word/google, or an app that you can handwrite on



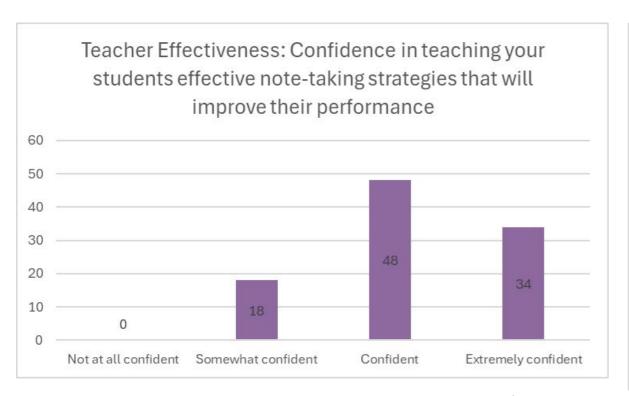
## Perspectives on note taking abilities

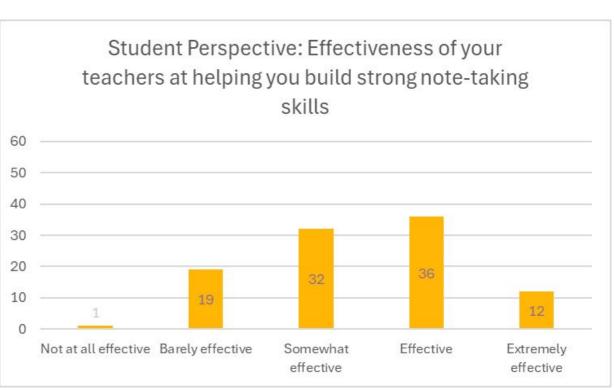


Insights into our Thinking: Teacher perceive students note-taking skills to be better than students perceive their own skills to be



## Perspectives on note taking skills

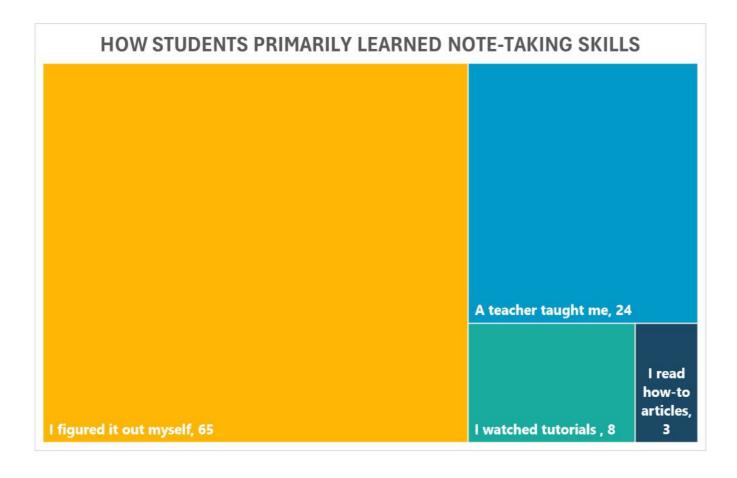




Insights into our Thinking: While teachers are overall confident in their ability to teach note-taking skills, students have a less favorable view of their teachers' ability to help them build their note-taking capabilities.

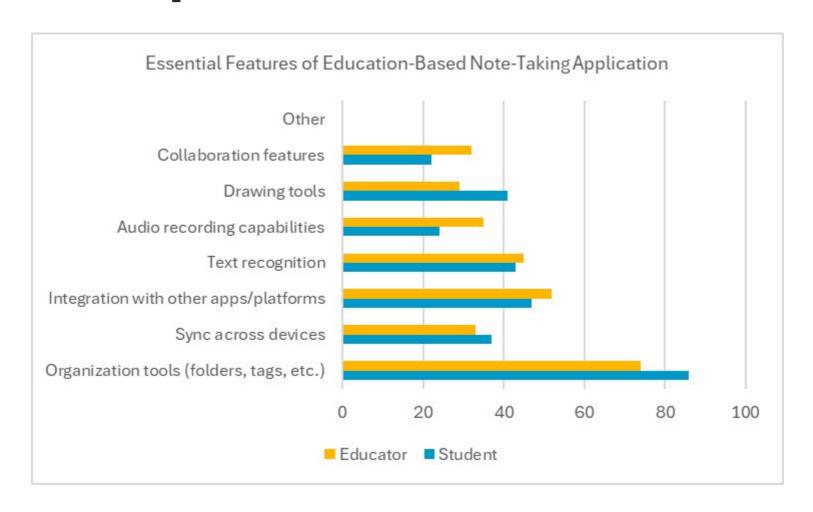


# Student perspectives on methods for learning note taking skills



Insights into our Thinking: Many students feel like they are left to figure note taking out for themselves- despite it being in many school districts curriculum objectives.

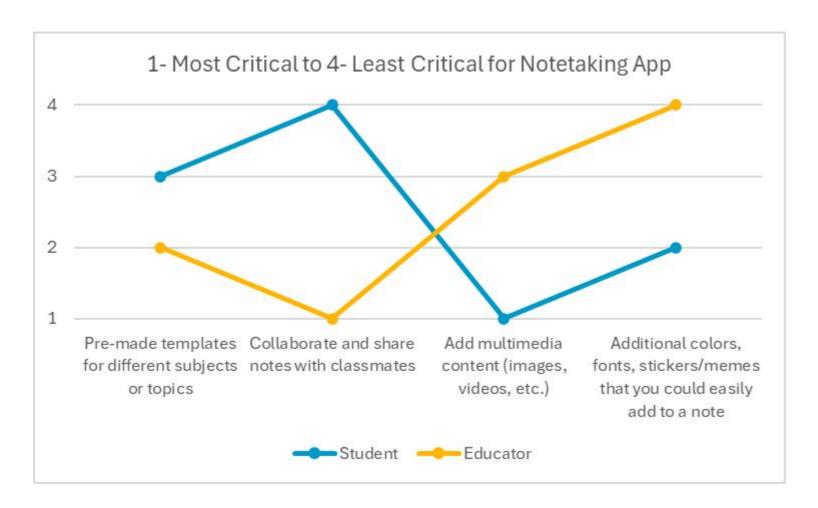
### Perspectives on essential features



Insights into our Thinking: Organization tools, integration with other apps/platforms and text recognition are essential. Students also wanted drawing tools based on interviews and survey data.

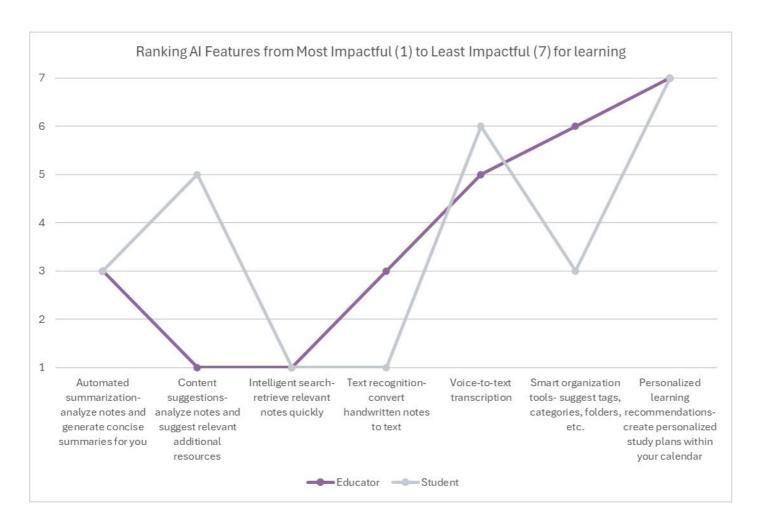


### Perspectives on critical needs



Insights into our Thinking: There are gaps between what students and educators see as critical. Educators most critical need was collaborate and share- which was least critical for students. Students most critical needs were adding multimedia content- which ranked 2nd to last for educators. Students also really wanted stickers/memes/fonts to personalize their notes- this also came up in the interviews and the students got really excited talking about it.

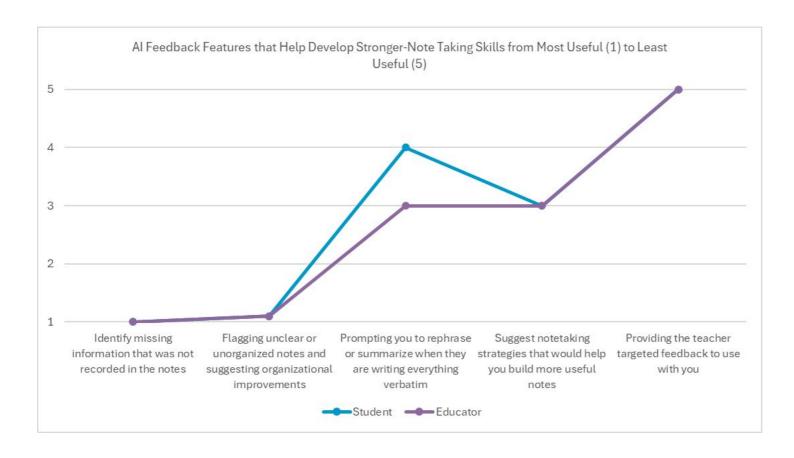
### Perspectives on Al features



Insights into our Thinking: Both perspectives agreed that more intelligent search that would retrieve relevant notes quickly was #1 for impact on learning. Students also saw converting handwritten notes- which aligns with the previous data on pen and paper still being the main method of note taking. Educators saw content suggestions- suggesting additional resources as impactful to student learning. Both ranked automated summarization 3rd. There was agreement among the two user groups that personalized learning recommendations would be the least impactful.

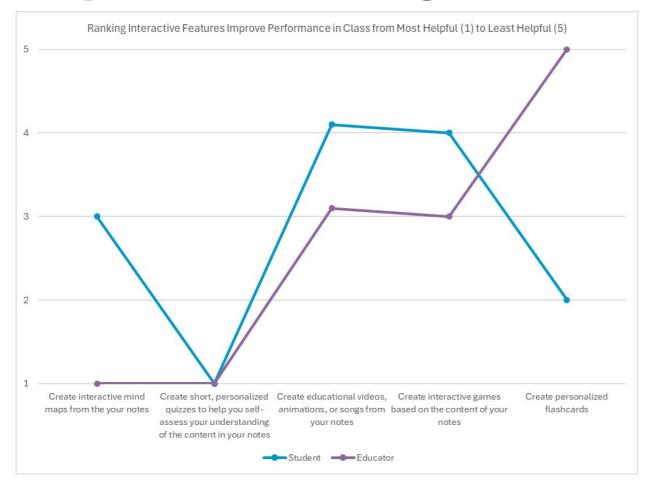


# Perspectives on AI feedback features to develop note taking skills

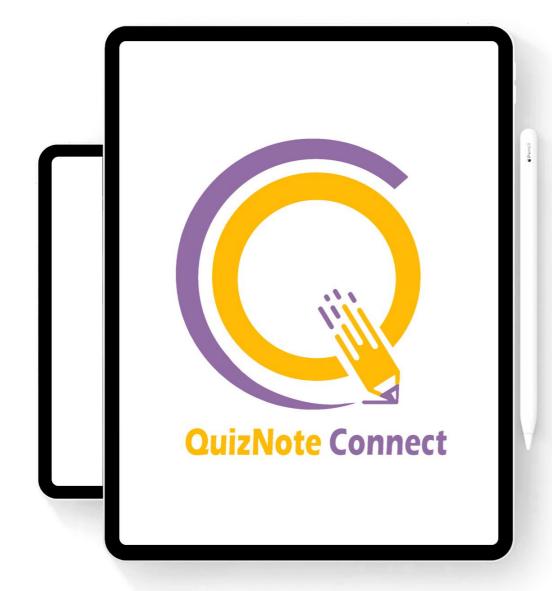


Insights into our Thinking: Both students and educators saw identifying missing critical information that was not recorded in the notes and flagging unclear or unorganized notes and suggesting organizational improvements as very useful to helping learners develop stronger note taking skills. Since there was strong agreement, these two features might be focus areas when developing the MVP.

# Perspectives on AI feedback features to improve learning



Insights into our Thinking: There was agreement between the two user groups on creating short, personalized quizzes to help self-assess understanding of the content as the most helpful for improving performance. This could also be a good focus area for our MVP. Students found creating personalized flashcards as helpful, but teachers ranked it last.



#### **User Research**

### **Key Insights**

There was agreement between the two user groups on creating AI generated short, personalized quizzes to help self-assess understanding of the content as the most helpful for improving performance.

Many students feel like they are left to figure note taking out for themselves- despite it being in many school districts curriculum objectives.

Many students are still using pen and paper for notes or basic word processing applications.

Organization tools, integration with other apps/platforms and text recognition are essential.





Competitor Analysis Based on Design Challenge: How might we improve teaching and learning through the combination of a note taking application and Al features?





We know that AI will change the note taking application capabilities. With note-taking and using the notes for reviewing for assessments such a critical part of the learning process in education- we felt these 5 capture the present snapshot of what students are using and the future possibilities of AI driven note-taking applications that truly revolutionize how students learn.

### Competitor Analysis Rationale- Identifying top 5 Competitors

## Why our top 5?

Notability	Notability is a note-taking application that focuses on multiple templates and organization of notes. It has many multimedia options and allows importing files and writing on top of. It focus on handwritten note features and is a good replacement for analog note taking. As of 2023, more than 5 million K-12 students use notability in 53 countries.
<u>OneNote</u>	OneNote is a digital note-taking tool designed to serve as a unified repository for all your notes, research materials, plans, and important information. It offers a convenient solution for managing your life, whether you're at home, in the workplace, or at school. OneNote has over 250 million users.
Quizlet	Quizlet is an online learning platform that allows users to create, study, and share flashcards and other study materials. Quizlet provides a user-friendly and effective way to study and master various subjects and topics. It has also added an AI tutor and other AI-driven tools. As of late 2021, quizlet has over 60 million users.
<u>Glean Notes</u>	Glean is a note-taking application that focuses on empowering students to take better notes. It focuses on learning and is sold to a similar market that we feel our application will target- school districts. It also recently added an Al-drive quiz creation for the notes. As of 2021, Glean Notes has 300,000 plus learners using the product.
Notebook LM	Notebook LM is an early stage AI driven application that is geared towards "doing your best learning, note-taking, creating, thinking." It is still in the experimental stage, but shows the possibilities of how AI features could change the note-taking application market.



Competitor Analysis - UX Audits of Most Popular Competitors

### **UX/UI Audits**

**Notability** 

**OneNote** 

**Quizlet** 







Follow the links to the Figma Audits

General user experience is seamless across all platforms. There are instant updates between the mobile and web versions. It is critical that QuizNote Connect be seamless as well as shown by data. This is soon to be a must-have in the very near future.

### Competitor Analysis- Features

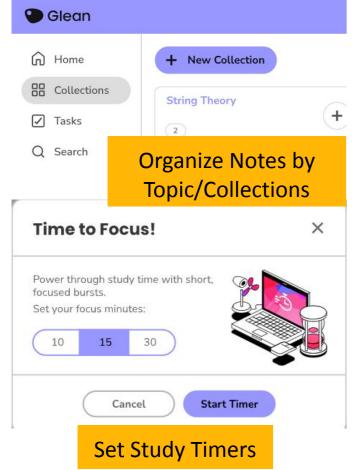
### **Feature Audit**

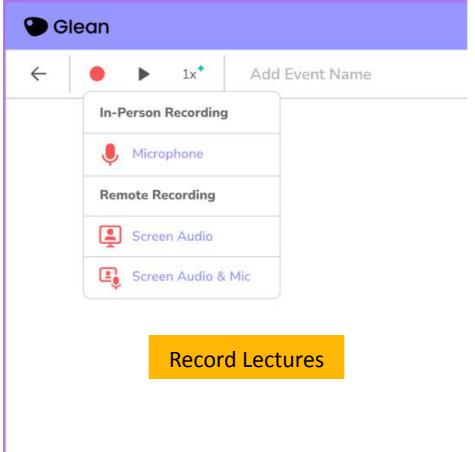
<u>Link to the complete</u> <u>feature audit</u>

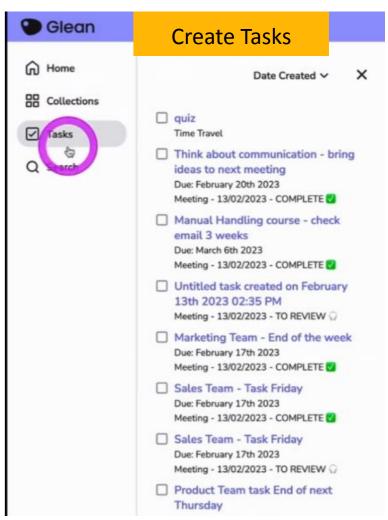
	A	В	С	D	E	F
1	KEY:	F = Available on free version	P= Available on paid version	NA = Not available		
2	FEATURE	NOTABILITY	ONENOTE	NOTEBOOK LM	QUIZLET	GLEAN
3	Premade templates (papers)	F	F	F	NA	NA
4	Premade templates for different subjects or topics	F	N/A	F- WHen prompted	NA	NA
5	Collaborate with classmates	NA	F	F	NA	P
8	Share with Classmates	F	F	F	F	P- export
7	Add multimedia content (images, videos, etc)	F	F	F	F	P
3	Additional colors/fonts that you could easily add to a note	F	F	NA	NA	Some
	Additional stickers/memes that you could easily add to a note	F	F	NA	NA	Some Emojis
0	Automated summarization	NA	N/A	F	F	NA
1	Content suggestions (suggest additional resources)	NA	N/A	F- Suggests additional prompts	NA	NA
2	Intelligent search to retrieve notes quickly	F	F	F	F	P
3	Text recognition (convert handwritten to text)	F	N/A	NA- Tested with my handwriting and it could not read it.	Yes- not sure if F or P yet	
4	Voice to text transcription	P	F	F -Yes on desktop	Maybe	P (from a microphone and a screen)
5	Smart organization tools (suggest tags, categories, folders, etc)	NA	F	NA	F	NA
8	Personalized learning recommendations (personalized study plans within calendar)	NA	N/A	NA	NA	?-Create Tasks
7	Identify missing information that was not recorded in notes	NA	N/A	NA	NA	NA
8	Flagging unclear or unorganized notes	NA	F	F - When it cannot answer the question it will let you kno w it needs more information	NA	NA
9	Suggest organizational improvements	NA	N/A	NA	NA	NA
0	Prompting to rephrase or summarize when writing everything verbatim	NA	F	NA	Р	NA
f	Suggest notetaking strategies that would be helpful to build more useful notes	NA	N/A	NA	F	NA
2	Providing the teacher targeted feedback to use with you	NA	N/A	F - Possible if notebook is shared	Р	NA
3	Create interactive mind maps	NA	N/A	NA	NA	NA
4	Create short personalized quizzes	NA	N/A	F - When prompted	F-Al created	P-Al created
5	Create educational videos, animations, or songs	NA	N/A	NA	Р	NA
6	Create interactive games	NA	N/A	NA	F	NA
7	Create personalized flashcards	NA	N/A	F - If you prompt it to do so	F	NA
8	Al tutor	NA	N/A	NA	P	NA

Feature Insights from Glean Notes

(learning)



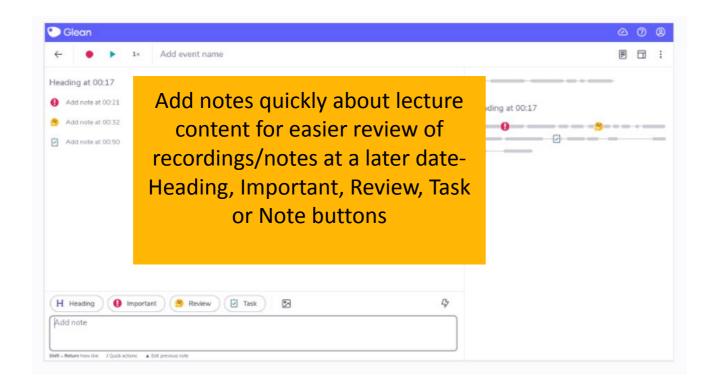


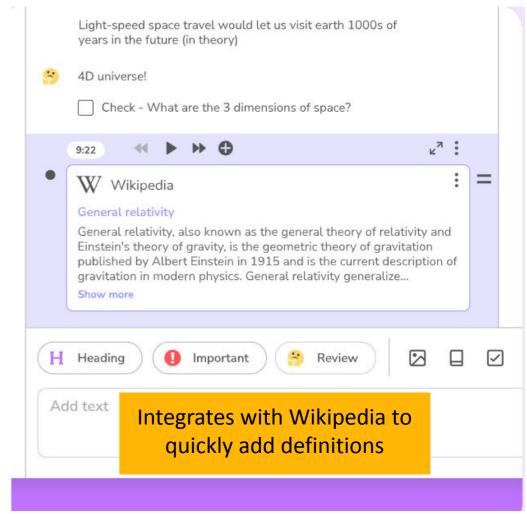




Feature Insights from Glean Notes (learning)

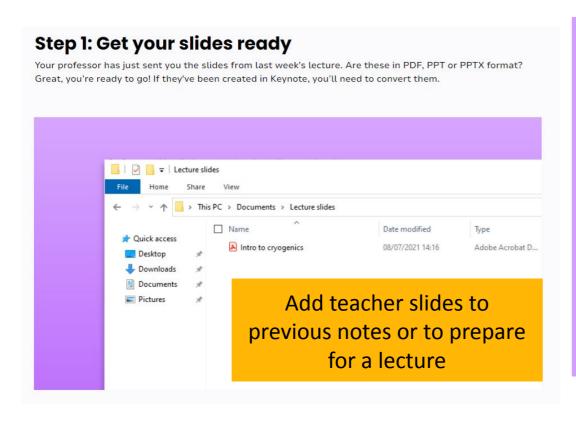
Light-speed space travel

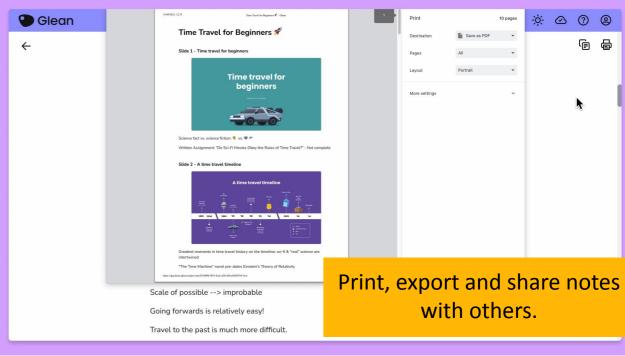






# Feature Insights from Glean Notes (learning)

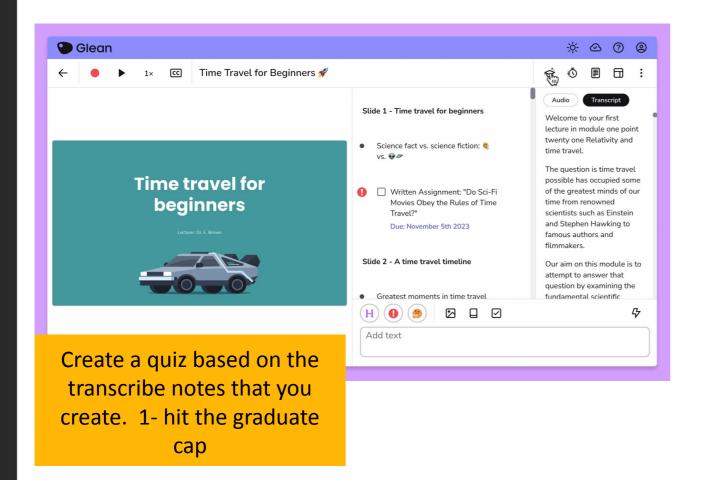


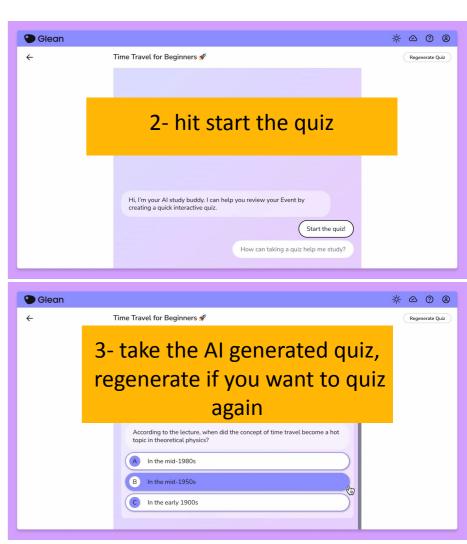




Feature Insights from Glean Notes

(learning)

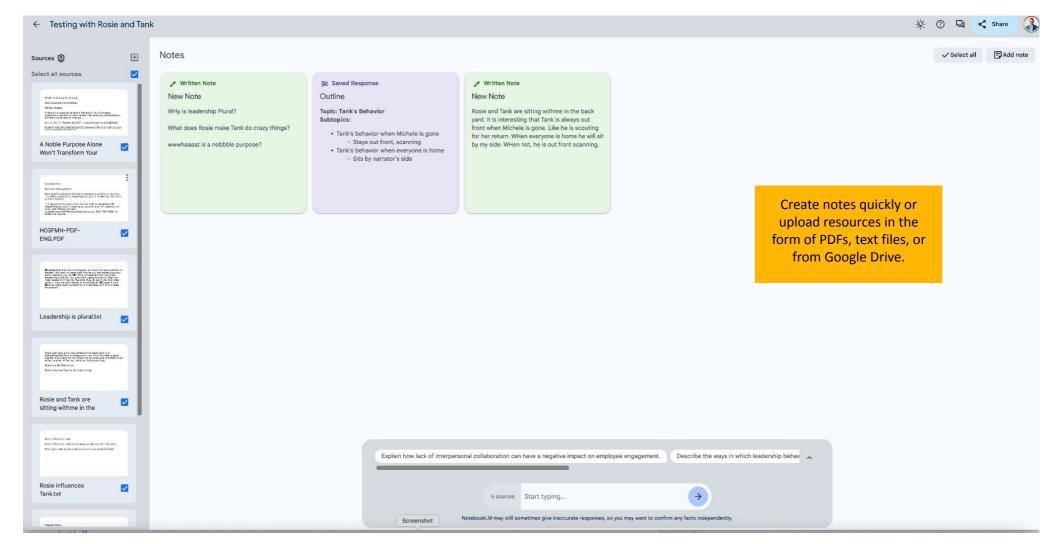






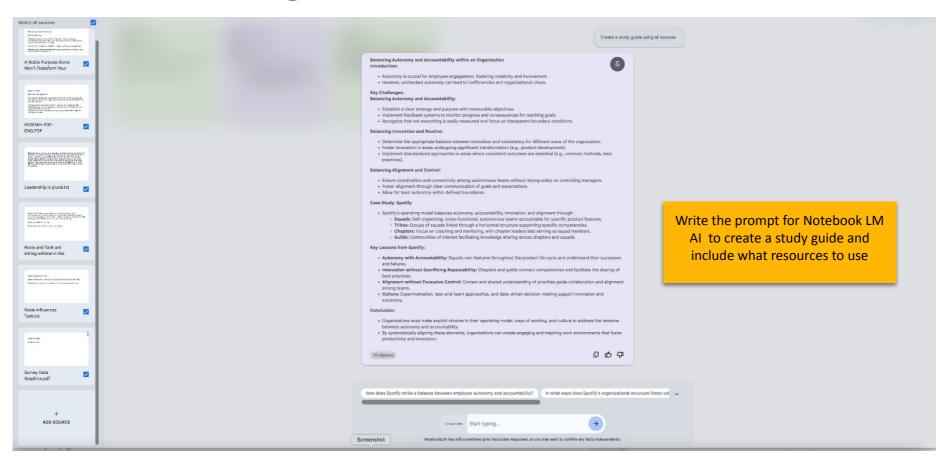
### Competitor Analysis - Al Features

# Feature Insights from Notebook LM (AI)



## Competitor Analysis - Al Features

# Feature Insights from Notebook LM (AI)



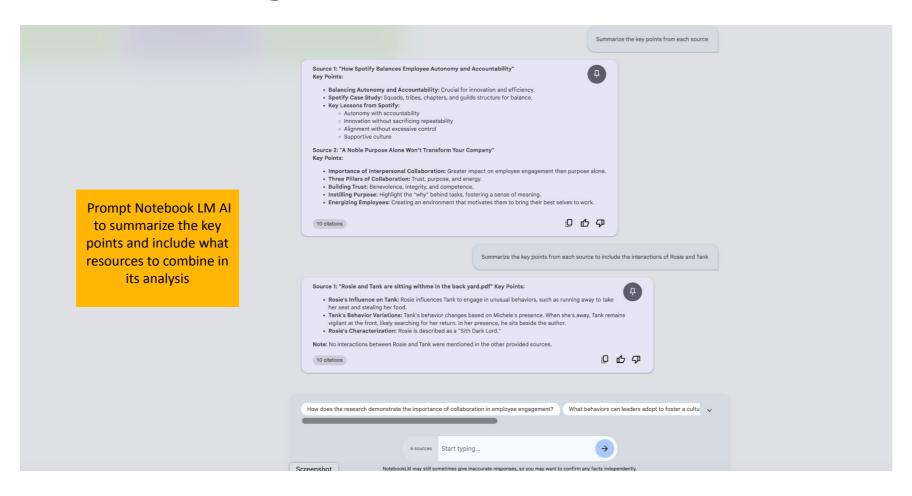


# Feature Insights from Notebook LM (AI)

Create flashcards using all sources **Balancing Autonomy and Accountability Key Points:** · Importance of Autonomy: Fosters engagement, creativity, and involvement. . Autonomy vs. Accountability: Need for balance to avoid chaos and inefficiencies. • Spotify Case Study: Squads, tribes, chapters, and guilds structure for balance. Key Lessons from Spotify: Write the prompt for · Autonomy with accountability · Innovation without sacrificing repeatability Notebook LM AI to Alignment without excessive control Supportive culture create flashcards and Key Terms: include what resources . Autonomy: Employee freedom to make decisions and act independently. to use · Accountability: Responsibility for results and performance. · Squads: Self-organizing, cross-functional teams at Spotify. . Tribes: Groups of squads linked through a horizontal structure. . Chapters: Focus on coaching and mentoring. · Guilds: Communities of interest facilitating knowledge sharing. □ 凸 切 10 citations How does Spotify balance employee autonomy and accountability? What steps can leaders take to enhance purpose and engagement among their 6 sources Start typing.. Screenshot NotebookLM may still sometimes give inaccurate responses, so you may want to confirm any facts independently.



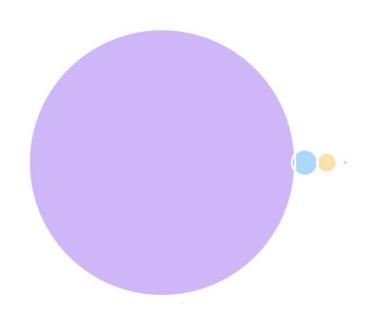
# Feature Insights from Notebook LM (AI)





# Semrush Competitor Data

#### **Keyword Overlap**



- https://notability.com/
- https://www.glean.com/
  63
- https://notebooklm.google/
  18
- https://quizlet.com/ 156.3K
- https://www.onenote.com/ 839

Insights into Our Thinking: There is not currently overlap between the 5 competitors we identified. This shows potential possibility by combining the capabilities of these 5 - we would be opening up a new market opportunity. Combining these insights with the survey data, we are beginning to see where to play in the market.

US | Domain | notability.com

69.04% 30.96%

Branded Traffic Non-Branded Traffic

## Competitor Analysis - Part 3

# Semrush Competitor Data- Notability



#### Organic Search: Top Keywords (28,990)

US | Domain | notability.com

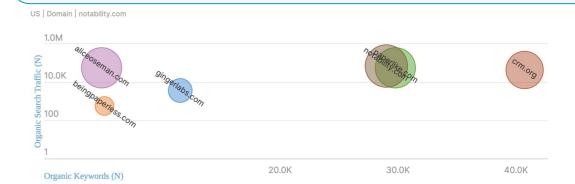
Keyword	Pos	Volume	Traffic
notability	1	33,100	38.06%
notability for windows	1	3,600	4.13%
notability app	1	2,900	3.33%
noteability	1	2,400	2.75%
notability login	1	1,300	1.49%

#### **Organic Search: Top Competitors (8,311)**

US | Domain | notability.com

Competitor	Com. Keywords	SE Keywords	Com. Level
gingerlabs.com	276	11.5k	27%
beingpaperless.com	113	5.1k	11%
paperlike.com	220	29.8k	7% •
crm.org	114	40.7k	3%
aliceoseman.com	67	4.9k	3%

Insights into our Thinking: Most traffic on the website comes from people that search for a keyword related to the branding of the app. The name notability is known in the market. This will be useful when considering how to design for SEO on the website and strategizing if/how to potentially get their users to switch to our product.



#### Keywords by Intent

US | Domain | notability.com

Intent		Keywords	Traffic
<ul><li>Informational</li></ul>	73.6%	25.6K	30.2k
<ul><li>Navigational</li></ul>	3.5%	1.2K	38.1k
Ommercial	7.3%	2.5K	5.7K
Transactional	15.6%	5.4K	9.2K

#### Branded vs Non-Branded

US | Domain | onenote.com

84.58%

15.42% Branded Traffic Non-Branded Traffic

#### Non-Branded (15.42 %)

# Competitor Analysis - Part 3

# Semrush Competitor Data- One Note

#### Organic Search: Top Keywords (23,674)

US | Domain | onenote.com

Keyword	Pos	Volume	Traffic
onenote	1	201,000	46.48%
one note	1	90,500	20.92%
microsoft onenote	1	14,800	3.42%
microsoft one note	1	8,100	1.87%
note	3	60,500	1.43%

#### Organic Search: Top Competitors (3,925)

US | Domain | onenote.com

Competitor	Com. Keywords	SE Keywords	Com. Level
ramsac.com	110	4.8k	11%
onenotegem.com	152	3.8k	11%
simplenote.com	187	3.4k	8%
miamifrp.com	78	3.2k	6%
cloud.microsoft	197	14.3k	5%

Insights into our Thinking: Like Notability- most of the traffic is branded. If we are looking to be an add-on to Microsoft Word and Google Doc- we would need to consider why/how they would want the add-on with word and Onenote

#### **Keywords by Intent**

US | Domain | onenote.com

Intent		Keywords	Traffic
Informational	39.6%	12.5K	29.2K
Navigational	23.6%	7.5K	314.1K
Ommercial	10.1%	3.2K	55.3K
Transactional	26.7%	8.5K	31.6K

#### **Organic Search: Competitive Position Map**

US | Domain | onenote.com



#### **Branded vs Non-Branded**

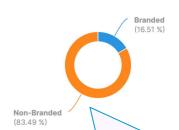
US | Domain | quizlet.com

16.51% 83.49%

Branded Traffic Non-Branded Traffic

# Competitor Analysis - Part 3

# Semrush Competitor Data- Quizlet



Insights into our Thinking: A lot of Quizlet

traffic is not branded. Key terms include

flashcards and specific content (ex. 26th amendment). Study.com is a key domain

where students go to practice/study what

they learn. Brainly.com has some AI

features that could be helpful for our MVP.

#### Organic Search: Top Keywords (6,900,399)

US | Domain | quizlet.com

Keyword	Pos	Volume	Traffic
quizlet	1	3,350,000	8.37%
quizlet	2	3,350,000	4.45%
quizlet live	1	368,000	2.96%
quizlet	3	3,350,000	2.77%
quizlet	6	3,350,000	1.18%

#### **Keywords by Intent**

US | Domain | quizlet.com

Intent		Keywords	Traffic
<ul><li>Informational</li></ul>	73.1%	5.9M	6.2M
<ul><li>Navigational</li></ul>	10.5%	848.2K	3.4M
Oommercial	3.6%	291.6K	404.1K
Transactional	12.8%	1.0M	1.1M

#### **Organic Search: Competitive Position Map**

US | Domain | quizlet.com

≝ 100.0M

3 10.0K

1000.0B

5.0M

7.5M 10.0M 12.5M

#### Organic Search: Top Competitors (522,880)

US | Domain | quizlet.com

Organic Keywords (N)

Competitor	Com. Keywords	SE Keywords	Com. Level
brainly.com	288.1k	4.7m	40%
coursehero.com	186.9k	2.9m	28%
chegg.com	166.2k	4.5m	24%
study.com	436.3k	12.7m	19%
libretexts.org	140.7k	2.9m	15%

# Semrush Competitor Data- Glean Notes

US   Domain   glean.com			
Keyword	Pos	Volume	Traffic
glean	2	40,500	48.61%
glean ai	1	1,900	13.82%
glean	9	40,500	11.96%
glean careers	1	480	3.49%
glean company	1	390	2.83%

Insights into our Thinking: Glean's identified competitors are websites with similar names, not a similar product. They have commercial traffic at 10%. There are currently no learning keywords they are ranking for that lead people to their site. That might indicate their sales efforts do not rely on website traffic. This may be useful when we develop our go to market strategy.

#### **Organic Search: Competitive Position Map** US | Domain | glean.com





#### **Organic Search: Top Competitors (994)**

US Domain dlean com

03   Domain   glean.com			
Competitor	Com. Keywords	SE Keywords	Com. Level
glean.co	69	4.0k	52%
glean.ai	42	273	41%
glean.software	13	60	18%
gleaneducation.com	10	209	14%
sonocent.com	14	193	14%

#### **Keywords by Intent**

US | Domain | glean.com

Intent		Keywords	Traffic
<ul><li>Informational</li></ul>	45.5%	1.6K	7.8K
Navigational	27.5%	950	2.8K
Commercial	10.1%	347	482
<ul><li>Transactional</li></ul>	17.0%	585	155

# Semrush Competitor Data- Notebook LM

27

6%

#### Branded vs Non-Branded

US | Domain | notebooklm.google

0.00%

100.00%

Branded Traffic Non-Branded Traffic

#### **Organic Search: Top Competitors (230)**

US | Domain | notebooklm.google Competitor SE Keywords Com. Level 15 17% 2.2k notebook.ai 15% thedataplumber.net 4 63 8% 5 11 notebooks.ai 8% thewordsmithspen.com 3 60

2

Insights into our Thinking: This is relatively new and still in the experimental testing stages, so the data is limited. You see the AI as part of the organic competitor searches. This will be an interesting thing to discuss when deciding on website links for searchesshould it be quiznote.ai? It is also connected with Google- how would we be different if we connect with Google?



#### **Keywords by Intent**

machine-learning-with-python.readthedocs.io

US | Domain | notebooklm.google

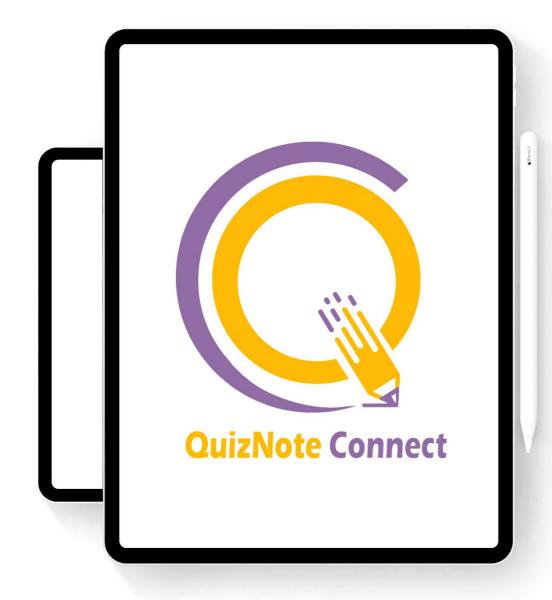
ntent		Keywords	Traffic
Informational	43.7%	172	7.21
Navigational	22.3%	88	1
Commercial	10.2%	40	28
Transactional	23.9%	94	,

#### Organic Search: Top Keywords (305)

US | Domain | notebooklm.google

Keyword	Pos	Volume	Traffic
notebooklm	1	22,200	76.30%
notebook Im	1	1,900	6.52%
google Im	1	1,600	5.48%
google notebook Im	1	720	2.46%
googlelm	3	1,600	1.81%

Congreted on April 10, 2024 The report data is taken from Commish



## **Competitor Analysis**

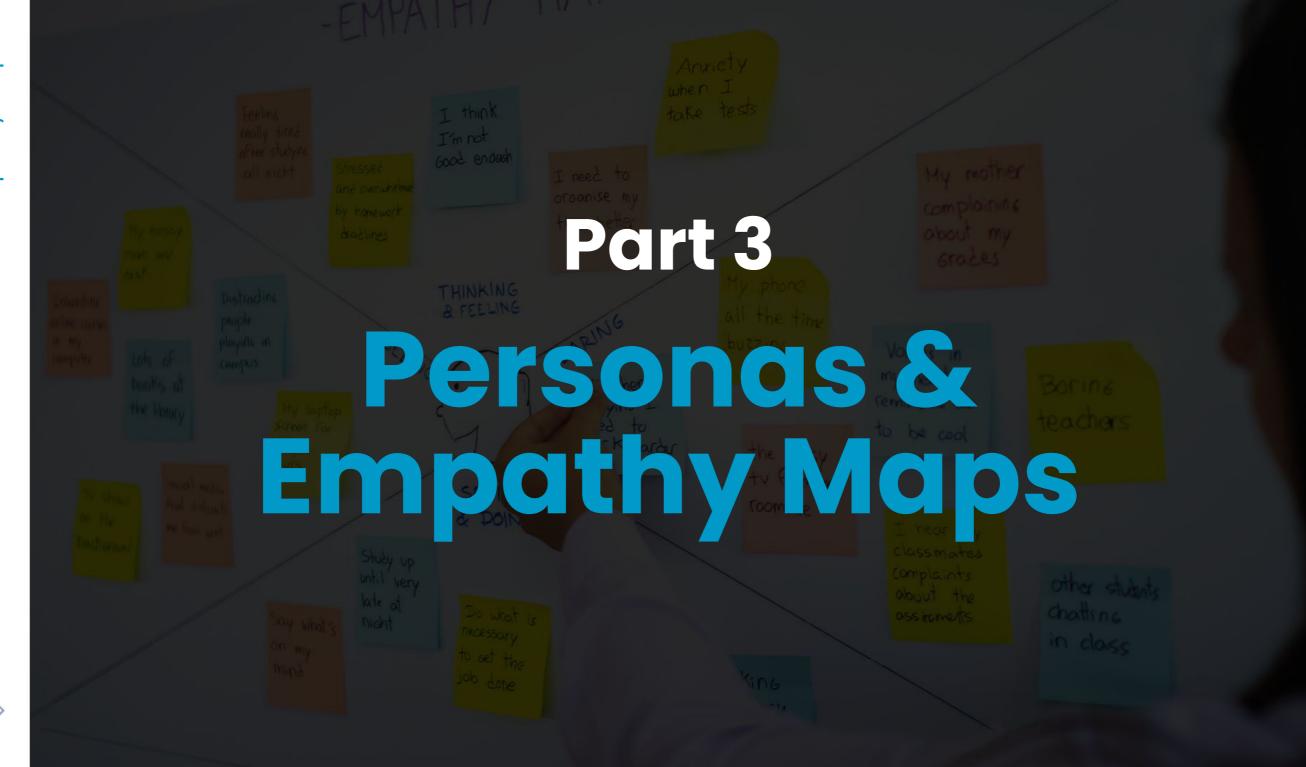
# **Key Insights**

There is not currently overlap between the 5 competitors we identified.

Harness the power of Quizlet's cutting-edge Al tools for optimized studying.

The simplicity of creating and organizing notes is a similar process across applications.

Utilize AI-generated notes equipped to pinpoint and rectify gaps and inaccuracies within your study materials.





# Kendall High School Student ORGANIZATION TIME MANAGEMENT

Kendall is a 17 year old high school senior. She is enrolled in the "College Academy" program which requires taking college courses in a high school setting. She would like an app to help her take notes in class and create flashcards, quizzes, and other study tools based on her notes. She currently uses separate note taking and quiz apps, as well as analog notes.

## **GOALS**

- Given her rigorous course load, Kendall would like an app to help her study more efficiently and learn to take notes more efficiently.
- She would like one app that combines the features of the many apps and websites she currently uses to stay organized and study for her courses.
- She would like to be able to easily collaborate on notes and studying tools with her instructors and her peers

## **DESIRES**

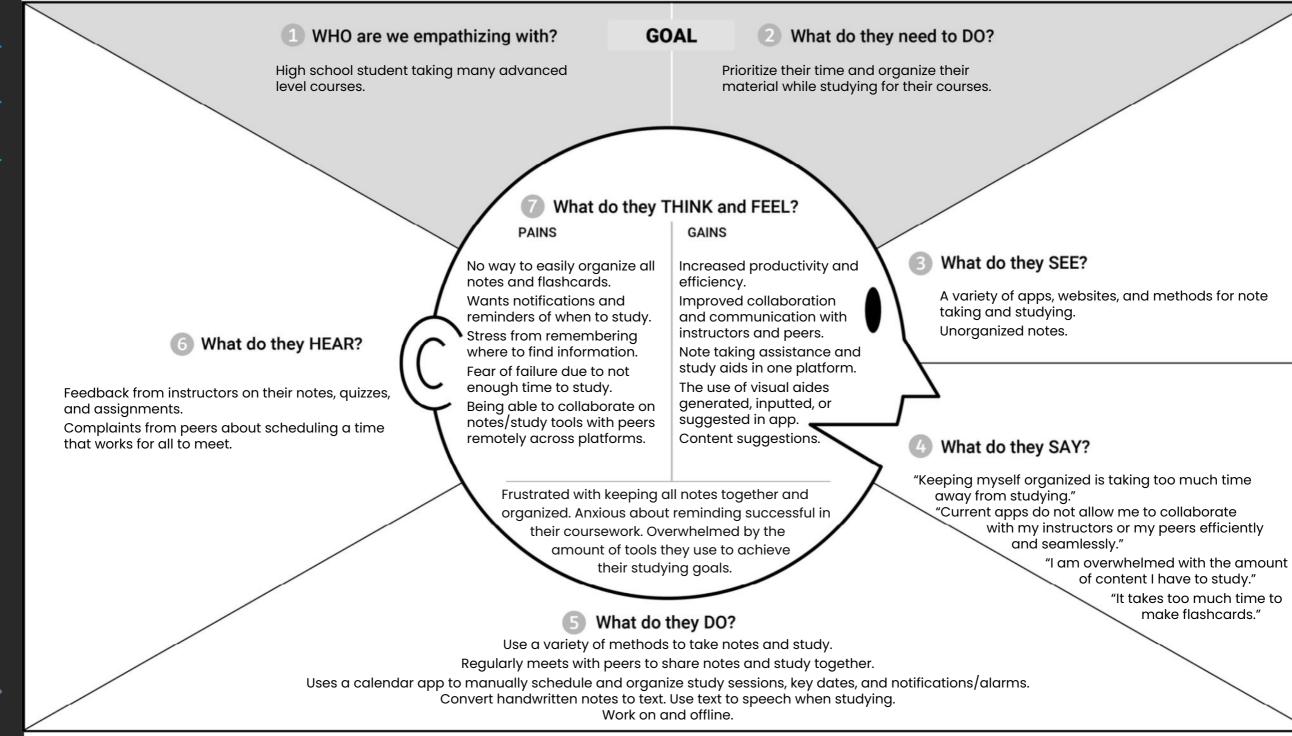
- Ability or organize all notes in one application with a variety of templates.
- Create quizzes and flashcards from notes taken quickly and easily.
- Ability to collaborate with peers on notes and documents.
- Schedule study times that will sync with calendar including notifications.
- Collaborate with instructors and peers on notes, study tools, and calendars.
- Interactive multimedia approaches to studying on and offline.

## **MOTIVATIONS**

 Kendall has a very busy academic calendar and a lot of tedious course work. She would like to study more efficiently to help maintain her rank in the top 5% of her class.

## PAIN POINTS

- Has to use a variety of separate tactics to keep herself and her studying habits organized (analog notes, note apps, quiz apps, calendars).
- Must schedule time to meet with instructors to make sure their notes align with the content
- Cannot easily collaborate digitally with peers across platforms and/or operating systems.
- Has to manually build flashcards and quizzes based on notes taking valuable study time.





# Hannah High School Teacher

**ORGANIZATION** 

TIME MANAGEMENT

Hannah is a 35-year-old high school educator driven by her love for teaching and empowering students to excel. With over a decade of experience and a master's degree in education, Hannah teaches English literature, where she aims to provide captivating lessons tailored to diverse learners. She is passionate about instilling vital skills in her students, including effective note-taking, organizing study materials, and mastering study skill strategies.

## **GOALS**

- Hannah aims to streamline her teaching materials, resources, and ideas using an app. She seeks a tool that helps her efficiently organize and categorize lesson plans, teaching resources, and educational materials to enhance her productivity and workflow.
- She is committed to equipping her students with effective study skills to excel academically. She seeks an app that integrates study tools and features to support her in teaching students how to take comprehensive notes, organize their study materials, and prepare for exams effectively.
- She would like to be able to easily collaborate on notes and studying tools with other educators and her students

## **DESIRES**

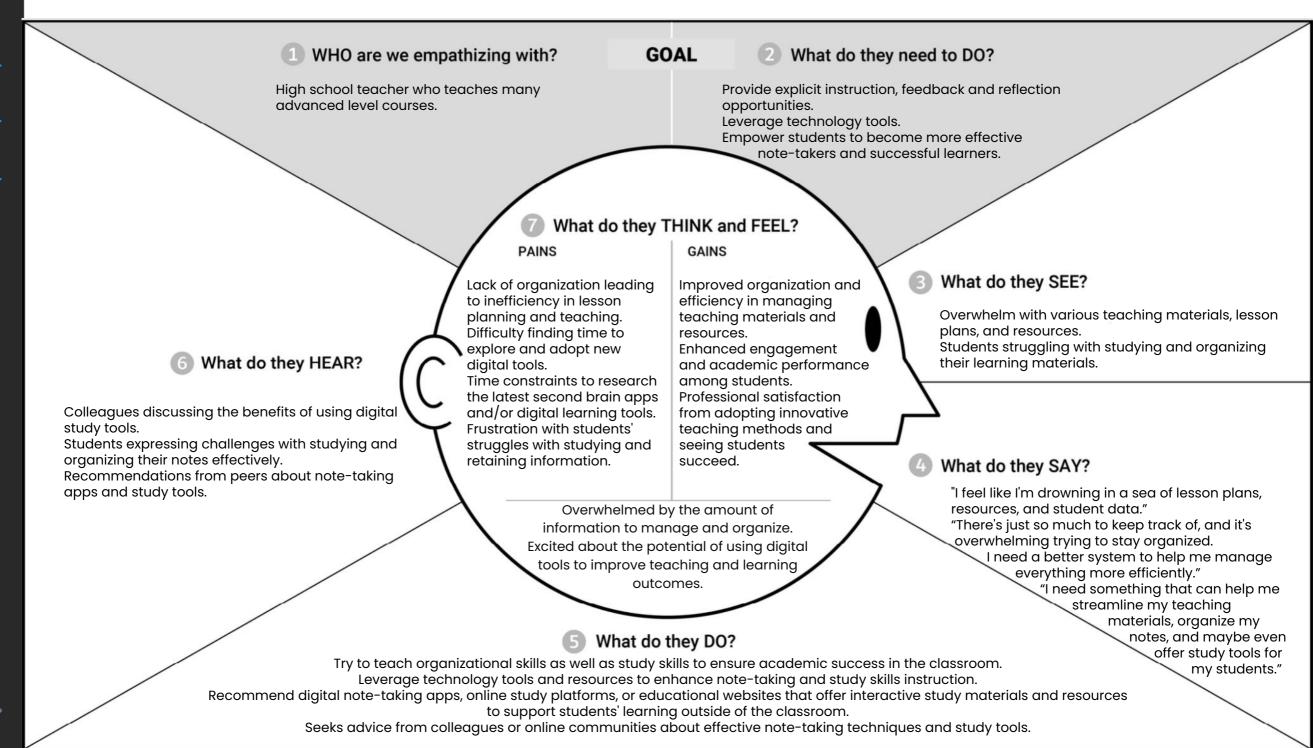
- Offers a wide range of study tools and features to support her teaching and help her students develop effective study skills.
- Desires features such as note-taking capabilities, flashcards, highlighting and annotation tools
- Ability to customize study plans to cater to different learning needs and preferences
- Create quizzes and flashcards from content quickly and easily for students to utilize
- Ability to collaborate with peers and students on notes and documents.

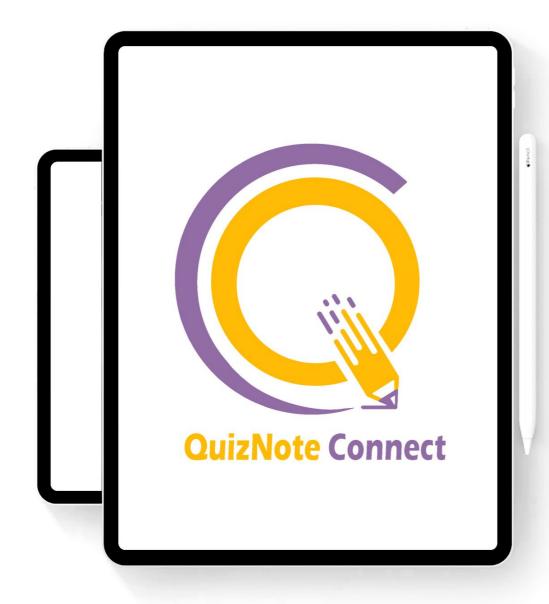
## **MOTIVATIONS**

- Hannah's passion for education, dedication to student success, and commitment to continuous improvement drive her need for innovative teaching methods.
- Teaching and empowering others drives her need for new ways to teach note-taking skills as well as foster good study habits.

## **PAIN POINTS**

- Teachers often struggle with organizing vast amounts of teaching materials, resources, and lesson plans.
- Integrating second brain apps or digital learning tools with existing teaching platforms and workflows can be cumbersome. Teachers may face compatibility issues or find it time-consuming to import and synchronize their teaching materials across different platforms.
- Accessibility across devices is crucial for teachers who need to access their teaching materials and study resources on various platforms and devices. Current apps may lack seamless synchronization or compatibility with different devices, hindering teachers' productivity.





## **Empathy Maps**

# **Key Insights**

Both students and teachers struggle with managing numerous materials and digital tools, including study resources for students and teaching materials for educators.

Integrating tools and platforms for smoother workflows is difficult for both students and teachers due to compatibility issues that may cause inefficiencies.

Creating test prep and studying for a test are both time consuming. Making them more efficient would be paramount. LectureAld

**Second Brain Application** 

**Start Presentation** 



## Our Iteration

# Name Change

We changed the name of our application from **QuizNote Connect to LectureAld** as we are focusing more on the Al features that can support note taking from lectures. The quizzes are an Al feature that supports their learning from the lecture.



Problem Statement- Our Version

# Design Challenge

How might we improve teaching and learning through the combination of a note taking application and AI features?





### **MVP**

# **Overview**

Based on our user research we are creating an iPad note-taking application that utilizes 4 key AI features that will help improve note-taking capabilities and learning from lecture notes for our MVP. In this presentation, we will explore:

- rationale for an App as MVP
- user stories and RICE
- rationale and creation of 5 key user flows
- rationale for IA and the Information
   Architecture
- low-fidelity wireframes
- IA for website landing page
- next steps



# App Version

# Rationale

After gathering all of the user research data, our team chose to create the student App version for our MVP. We identified 3 critical data points that were the foundation of our user-focused design decisions.

Create an iPad/tablet application for our MVP because it allows for both handwriting and typing which was a critical need for our users. Our research also showed that many learners still use pen and paper (~75%) and would like to be able to write. Secondary research showed that learners are less likely to be distracted when taking notes on tablets.

With the key design challenge around note taking that supports better learning, our first MVP should focus on the students so that we can understand how the features could impact their learning and then move to the teacher MVP once we understand all the capabilities the students need.

Based on our competitor analysis, applications like Notability are seamless between the web and application versions. This was also one of the essential features desired by the users in our research. The ability to integrate across apps and platforms was the second highest feature. By starting with an app, we can more easily plan for integrations.





## Getting students started in the app

# **User Story #1**

A teacher wants to use LectureAld in their class to help their students take better notes and be able to use their notes to better learn the material and study for their exam. To get started in their class, they need to have the students download the application on their devices and join the class binder. To do this, the student will go to the LectureAld webpage, click to download the application they need which will take them to the app platform. From there they will need to create an account and once authenticated they will get to the binder page.

#### **Key Features Needed**

Ability to create a username and password

Ability to join a class binder

Ability to download the application

Ability to get back into the application after signing up

#### RICE

**Reach:** The potential reach could be significant, especially considering the widespread use of study aids among students. Teachers could potentially use LectureAld in their classes, impacting multiple students at once time. Designed to be marketed to teachers and school districts, getting students registered will be a critical part of the journey.

**Impact:** If teachers and students experience frustration getting into the application during a trial, they will not purchase. It is their first impression.

**Confidence:** Since login and signups are part of most applications, we are confident we can provide a good first impression and user experience. The success of the feature would depend on factors such as user adoption rates among teachers and students, as well as the effectiveness of the app's features in improving note-taking and studying. This aligns well with existing market demand for study aids and educational apps.

**Effort:** Implementing these features would involve developing features for both teachers and students, including class management tools for teachers and user authentication and profile creation for students. Integration with AI support for note-taking improvement may also require additional effort. By focusing first on students, we put the effort that matches our needs for our MVP.



## Creating and Sharing Lecture Note-LectureAld

# **User Story #2**

The student is sitting in class getting ready for their teacher to start the lecture. They get into their class binder and start a new lecture note from the templates for that day. When they click start a note, they have the choice to name the note themselves or use the name the teacher provided for the day. After picking and naming their note, they will have a space for typing or handwriting their notes with Lecture Ald assistant. They can also upload or insert a document to annotate. They will also be able to quickly start recording the lecture. This will allow them to quickly go back to the recording to make their notes better and fill in any missing gaps. They will be able to transcribe their recording into their notes as well. Students can make their notes better by adding multimedia content, stickers, sketch/draw within their template. They can then share the document, invite peers to collaborate, or utilize NoteAld.

#### **Key Features Needed**

Ability to scan and import documents

Ability to handwrite/draw/sketch or type

Ability to record and transcribe

Ability to import multimedia content such as images, GIFs, videos, and webclips.

Ability to share to and collaborate with peers

#### RICE

**Reach:** Almost all students in educational institutions could potentially use these features. Apart from NoteAld, these are standard features in note taking applications. Our user research showed that many of these features are considered table stakes and would be expected by any user to be part of our application.

**Impact:** By providing tools for easier note-taking, students can enhance their learning experience and improve their note-taking efficiency. This could potentially lead to better academic performance and understanding of the material. These basic features are expected by all users and critical to retention metrics and user ratings.

**Confidence:** Since similar features are already available in various note-taking apps and educational platforms, there is a good level of confidence that this feature will have the expected impact, especially if implemented well and with user feedback in mind. Our user research supported the inclusion of all of these features.

**Effort:** Given the complexity of the features including integrating recording capabilities, transcription services, multimedia support, collaboration features, and a user-friendly interface, the effort required would likely be high. We suggest potential partnerships with third-party services for transcription and multimedia support. These features have a high potential for a positive impact on users.



## Utilizing NoteAld to make notes better

# **User Story #3**

At the end of the lecture, the student can activate the NoteAld. They will have a choice to get a summary of their notes, get feedback on their notes, or have the NoteAld find additional resources that might be useful for their deeper learning of the material.

If the student chooses summarize notes, they will get an AI generated summary of the notes they tool and an AI generated summary of the recorded lecture. They can add both to their lecture notes.

If the student chooses feedback, the NoteAid will compare their lecture notes with the recording and/or teacher notes and provide them with the key areas they are missing or areas where their notes might be incorrect.

If the students chooses additional resources, it will create a set of links to materials and videos that might help them with additional and deeper learning of the material.

#### **Key Features Needed**

Activate the NoteAid

Choose between summary, feedback, additional resources

Summaries to be created and easily entered into lecture notes

Feedback to be created and added to the lecture note with helpful and easy ways to go find the information to make the notes better

Additional resources to populate and create a set of links that can be added to the lecture notes for when the students come back to review.

#### RICE

**Reach:** We imagine that most users will utilize this feature and it will be one of the main reasons for their purchase decisions. The new value our app brings to the market is helping teachers and learners develop their note-taking skills. This feature is geared specifically to this pain point. Survey respondents ranked high the need for automated summarization (3rd) and content resource suggestions (1st).

**Impact:** NoteAid is focused on impacting the quality of notes that students take because research has show it will impact their academic performance. Once students and teachers see the impact on performance, we would see more retention and renewals of the application. This will most likely be a feature that impacts decision makers for utilizing our note-taking application over others in the market.

**Confidence:** Since this is a newer feature and is where our application differs from others, we will need to get a lot of feedback and often to make the right iterations before the product launches. Since this is the case, this would be an area where we first focus on one option and then build out the other options. Based on other AI models out there, we are 80% confident that we can deliver high quality summaries that will be useful to the user.

**Effort:** Based on estimated of the total work to complete the project, it seems to make the most sense to start with the summarization feature. It will be the least amount of effort and the easiest to get feedback on to make quick iterations before we go to market. FOR AI feature- use existing libraries/stacks, speed up development process.



## Creating Study Materials with StudyAld

# **User Story #4**

If a student has a test coming up, they will want to study. They can go to their binder for that class and pick a note or multiple notes. They can then hit the StudyAld button and will be given a choice of different review games, quizzes, sample essay questions, or flashcards that they can complete. Once the student has made their selection, an Al created study aid will be created and the student can do the review and get help as needed.

## **Activate the StudyAld**

Choose between flashcards, quiz, collaborative review game or sample essay questions

AI will create the study aid

Feedback will be given once the study task has been completed

#### RICE

**Reach:** For an individual, this might be just be themself, but if they're part of a larger group or class, it could involve multiple people. Since our application is learning focused, this is a tool that would be heavily utilized in classrooms. Based on user research, we know that teachers and students are looking for ways to improve performance.

**Impact:** If utilizing a study aid, the impact could be the improvement of a student's knowledge on a particular subject, which could lead to better academic performance, increased confidence, or a better understanding of the material. If users see the connection between this feature and their performance in class, they are more likely to be retained as a customer. This should improve customer experience scores because they can use the same application to take notes and study, which eliminates time from their current processes.

**Confidence:** Based on the prevalence of use of quiz games and other technology based study aids, we are very confident that users will find the value in this feature. In our user research, creating short, personalized quizzes was ranked #1 for features that improve learning.

**Effort:** Compared to traditional pen-and-paper methods or other digital study tools, StudyAld might require less effort in terms of creating flashcards or finding relevant study materials since it provides a platform for users to create and share study sets. It would also be personalized since the study materials would be solely based on the student's notes. To minimize the investment in time and monet, we would utilize Al models that are utilized to support quiz creation to minimize effort needed for our MVP.



## Asking ChatAld a question

# **User Story #5**

The student can activate ChatAld at any time that they need help. They will have the choice to get help with using the app, learning the content or finding something in their notes.

- If the student needs help using the application, they can ask the ChatAId a questions and they will provide support based on user instruction materials
- If the student needs help learning the content, the ChatAId will ask and answer questions about the content
- If the student needs help finding something in their notes, they will get a prompt to allow them to search their notes for that topic, word, etc.

#### **Key Features Needed**

Activate the ChatAld

Choose between App Help, Learning Help, Search Help

App Help will allow them to ask questions and find answer to their questions related to the app technology and capabilities

Learning Help will allow them to ask and answer questions about the content so they can learn it better

Search Help will allow them to find information in their notes

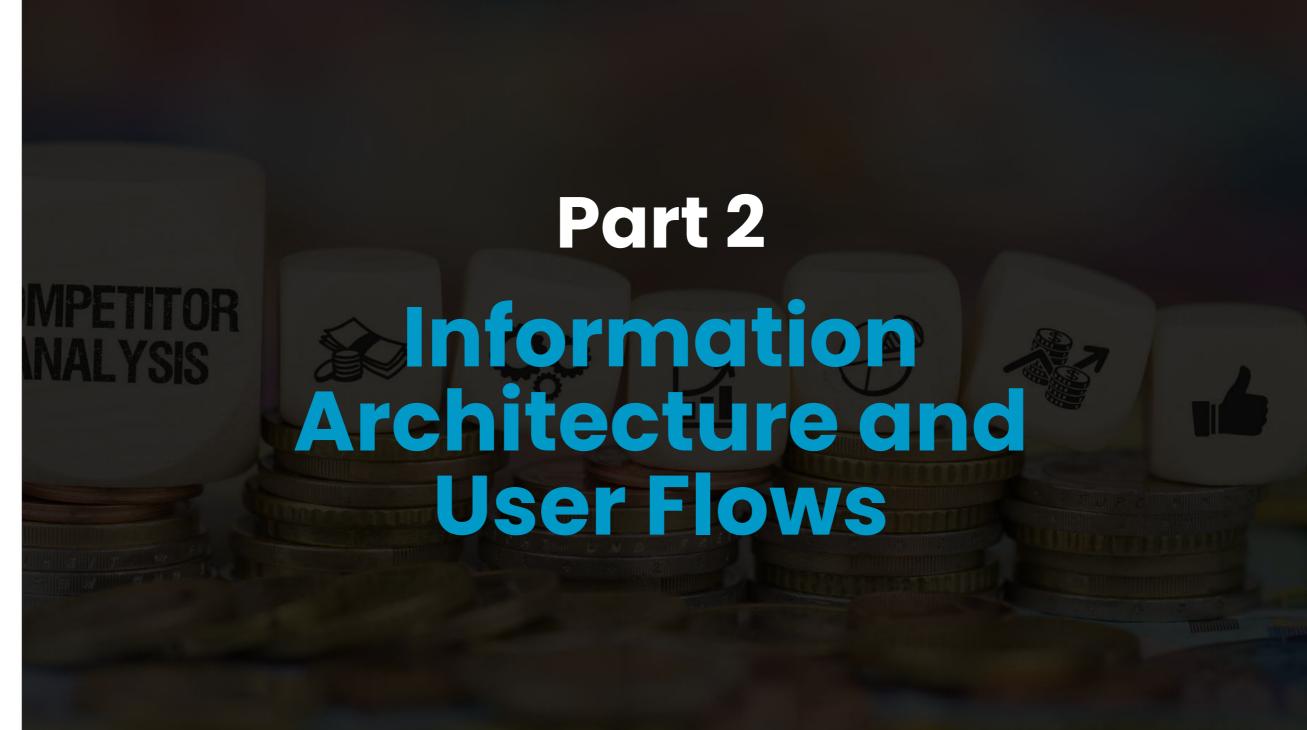
#### RICE

**Reach:** All users at some point will need help with something, so this provides an easy place for all of their help needs regardless of what they are. Help features in applications are considered critical and should be thoughtfully developed so it can be supportive when users need it to be.

**Impact:** This is critical for user satisfaction especially when they get stuck or have issues that they need help with. If users can't easily get the help they need, they are more likely to abandon the application and impact retention rates.

**Confidence:** Help sections are part of every application and are expected in a MVP. For specifically the learning component of our Chat Ald, we found in our research that students were having to figure out note taking on their own, this help feature will provide the support they are missing. Also, having an easy search was ranked 1st as one of the features they need in the application.

**Effort:** The App Help and Search Help will be similar to many other development projects, so will require some effort but not too many unknowns. The Learning Help will require more effort but is critical to the application and its value of supporting the learning journey.





## Key User Flows

# **Top 5 User Flows for MVP:**

Flow 1	Downloading the application and signing up
Flow 2	Creating and Sharing a lecture note with LectureAld
Flow 3	Utilizing NoteAld to create a summary of your notes
Flow 4	Creating a quiz with StudyAld
Flow 5	Asking ChatAld a help question

Based on the user stories and insights from completing the RICE framework in the previous slides- we narrowed in on these five user flows for our MVP. Our decision making process included:

- features critical to ease of use
- features critical to our value proposition of helping them learn to take better notes and learn the materialwhich would impact business metrics for retention and renewals
- managing the amount of effort needed to create the first MVP of the product



## Information Architecture

# Summary

Our team created a first iteration of the information architecture on our own and then collaborated to create a collective iteration that best capture the structure needed for the application. This was a very helpful process for creating a stronger IA for our application.

Focused on the 4 key "Ald" features to develop what each one would include.

Focused on the best way to organize the application so users can easily utilize all the features and navigate to their next need.

By structuring our IA the way
we did, we allowed for
effective scalability as more
features are added, which we
saw as a critical need for this
app.



Figma Link

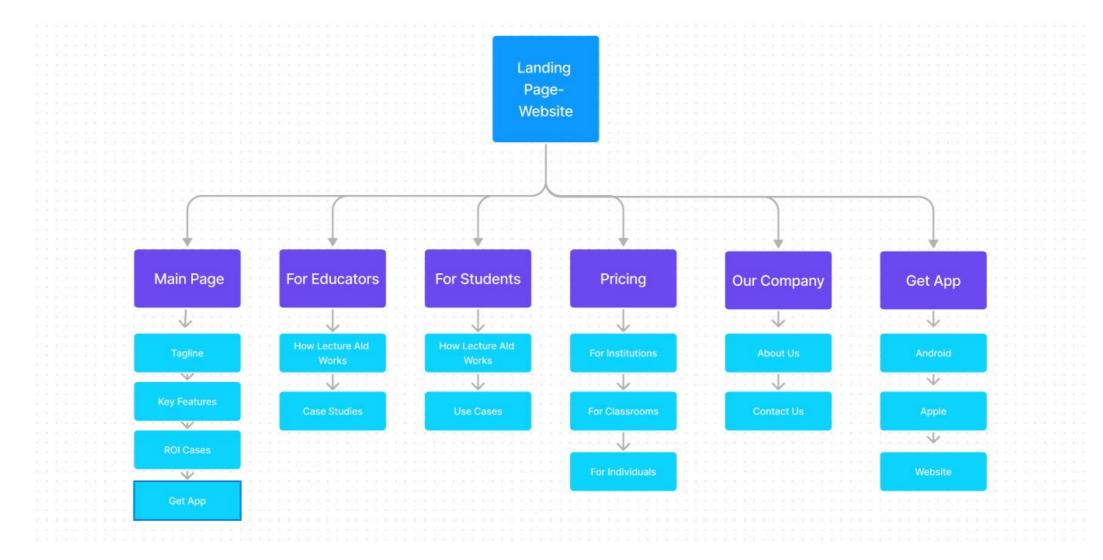
# Information Architecture and User Flows:

**Click for Figma File** 



# Website Landing Page

# **Information Architecture:**





# THANK YOU!

How might better note-taking lead to better learning?



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