TRANQUIL
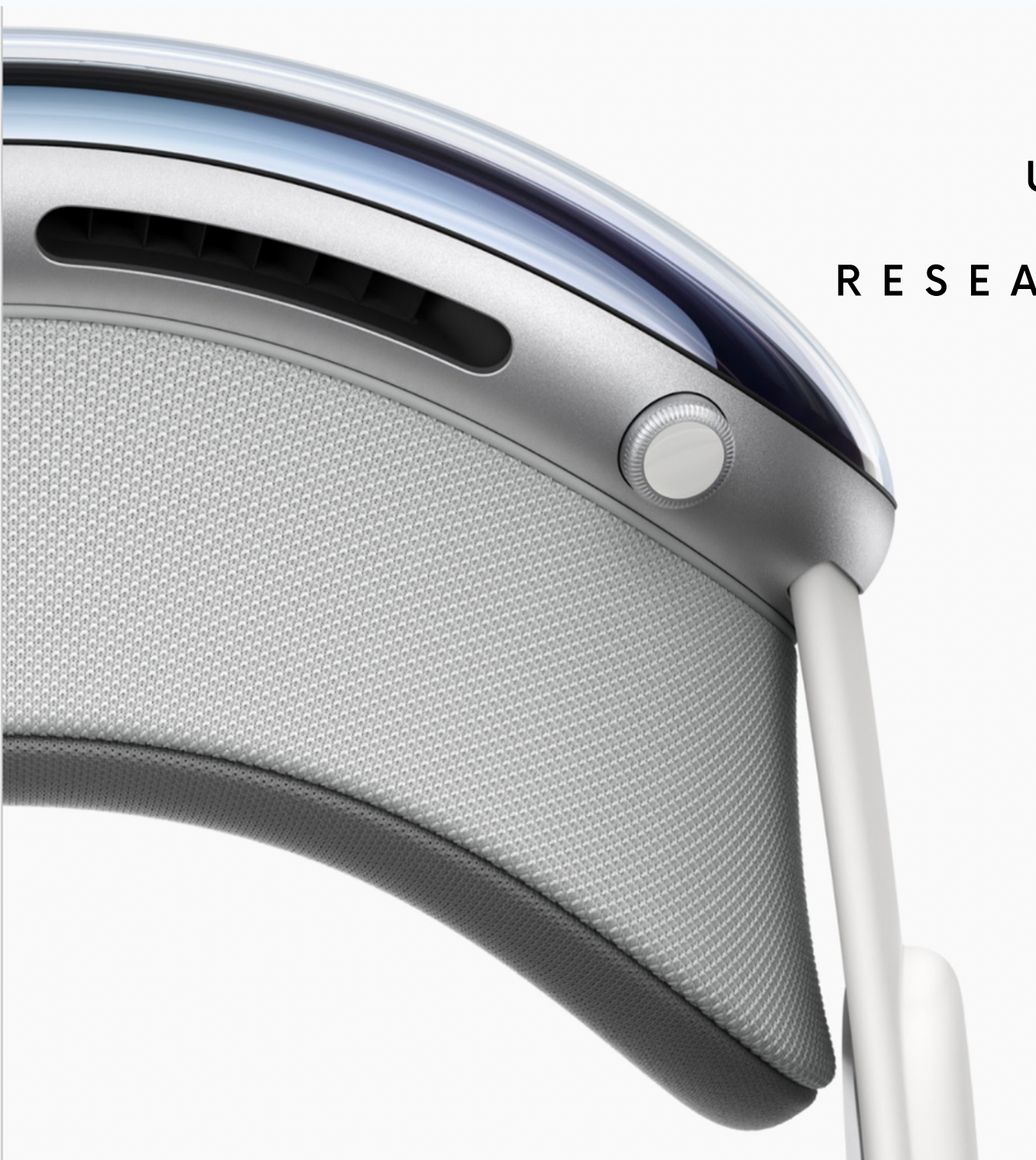
RESEARCH OBJECTIVE

The objective of our research is to reach our target audience to comprehend their study habits in order to optimize features for future users of TRANQUIL. We want to encourage our audience to acknowledge the barriers and flaws they face within their current study habits and in what ways can our applications best support their means to study. We plan to design TRANQUIL to offer unique study methods and features that can allow our users to focus fully on their capability of memorization in an entirely immersive space of their picking.

TARGET AUDIENCE

Throughout our research we generally targeted grad and undergraduate college students in order for us to capture the understanding of what learners who are actively studying often look for in study applications and healthy study habits.

RESEARCH METHOD

To better meet our target audience's means of studying we released a 12-question survey to best understand what college students or any learner look forward to in a study application. At the end of the survey, we offer an opportunity to individuals to volunteer for a short 6-question interview. After a random pick of 8 individuals, each interviewee was questioned on an in-depth comprehension of their health and unhealthy study habits, as well as their likes and dislikes of study applications. During this process we've hoped to best understand what strays people away from certain study applications and by what means we can make it more applicable for each individual.

SURVEY RESULTS

How often do you study? 111 ⓘ

Q4 - How often do you study?	Percentage	Count
1 - 2 times per week	32%	36
3 - 5 times per week	47%	52
Once daily	10%	11
2+ times per day	11%	12
Sum	100%	111

What are your favorite study methods? 111 ⓘ

Q6 - What are your favorite study methods? - Selected Choice	Percentage	Count
Study apps (ex. Quizlet)	41%	46
Making a study guide	41%	45
Reviewing notes	80%	89
Other	19%	21
Sum	181%	201

Our survey shows that college students often study on an average of 3-5 times out of the week and a majority of those students prefer studying by reviewing notes. In addition methods such as, practicing problems, reading textbooks, videos, and flashcards.

- Based on these results from the survey we plan to include various unique study methods that can cater to each individual encouraging their ability to memorize their material with their preferred method.

SURVEY RESULTS

What gender best describes you? 111 ⓘ

Q1 - What gender best describes you?	Percentage	Count
Female	65%	72
Male	32%	36
Non-binary	2%	2
Prefer not to say	1%	1
Sum	100%	111

What is your age group? 111 ⓘ

Q2 - What is your age group?	Percentage	Count
18 or younger	7%	8
19 - 21	65%	72
22 - 24	22%	24
25 - 27	3%	3
28 or older	4%	4
Sum	100%	111

Which of the following racial or ethnic groups do you identify with? 111 ⓘ

Q3 - Which of the following racial or ethnic groups do you identify with?	Percentage	Count
White	45%	50
Black or African American	23%	25
American Indian or Alaska Native	1%	1
Asian	26%	29
Native Hawaiian or Pacific Islander	0%	0
Hispanic	10%	11
Other	0%	0
Prefer not to say	1%	1
Sum	105%	117

.Here are some general questions we asked in order to best capture the general demographics of our targeted audience.

SURVEY RESULTS

How long in advance do you start studying for an upcoming exam? 111 ⓘ

Q7 - How long in advance do you start studying for an upcoming exam?	Percentage	Count
Less than a day	12%	13
A few days	57%	63
One week	23%	25
More than a week	9%	10
Sum	100%	111

A lot of them do not genuinely hold me accountable for getting work done. They are all just like a to do list.

Our survey shows that 57% of college students only study a few days in advance before an exam. Moreover, a survey participant later mentioned that a general issue with study apps is that they do not hold their users accountable for effectively completing their tasks in a timely manner.

- Based on the results of this survey question we plan to offer a 'goals feature' that allows our users to set goals and reminders for themselves to encourage consistency within their study habits. In addition, we plan to offer our users the ability to track their progress and see the developments they make upon their set goals.

SURVEY RESULTS

Where do you study? 111 ⓘ

Q5 - Where do you study? - Selected Choice	Percentage	Count
In your room/personal space	77%	86
Coffee shop	35%	39
Study room on campus	69%	77
Other	8%	9
Sum	190%	211

What is your biggest distraction when studying? 111 ⓘ

Q9 - What is your biggest distraction when studying? - Selected Choice	Percentage	Count
Phone (social media, text messages, etc)	91%	101
Notifications	29%	32
People (talking, walking by, etc)	48%	53
Access to other things/distractors? (ex. the internet)	16%	18
Sum	184%	204

The survey results show that 77% of college students prefer to study in their room/ personal space and 69% of college students said they like studying on campus in the study rooms.

- The Apple Vision Pro offers an <u>immersive feature</u> allowing the user to expand any room into an entire setting of their choosing. We plan to utilize this feature by offering our users the opportunity to study in an immersive setting of their choosing.

When asked what their biggest distractions are while studying 91% of college students say that their biggest distraction is their phone and 48% say that their biggest distraction is other people.

- In addition, the Apple Vision Pro offers the <u>Passthrough</u> feature which allows the user to actively interact with virtual content while also seeing their actual surroundings. Therefore, allowing our users to study in a group setting while still being capable of fully focusing on their own material in an immersive space.

SURVEY RESULTS

Do you study better alone or with a group? 111 ⓘ

Q8 - Do you study better alone or with a group?	Percentage	Count
Alone	42%	47
In a group	5%	6
Depends on subject/material (both)	52%	58
Sum	100%	111

Do you use the Do not Disturb functionality on your devices when studying? 111 ⓘ

Q11 - Do you use the Do not Disturb functionality on your devices when studying?	Percentage	Count
Yes	72%	80
No	28%	31
Sum	100%	111

Based on the survey results show that 42% of college students prefer to study alone while 52% say whether they study alone or together depends on the material they are studying. When asked whether they use the Do Not Disturb function while studying 72% of college students say they do while 28% say they do not use the Do Not Disturb function while studying.

- Based on the results of the survey we plan to offer a DND feature that allows our users to avoid any distractions from outside sources and notifications.
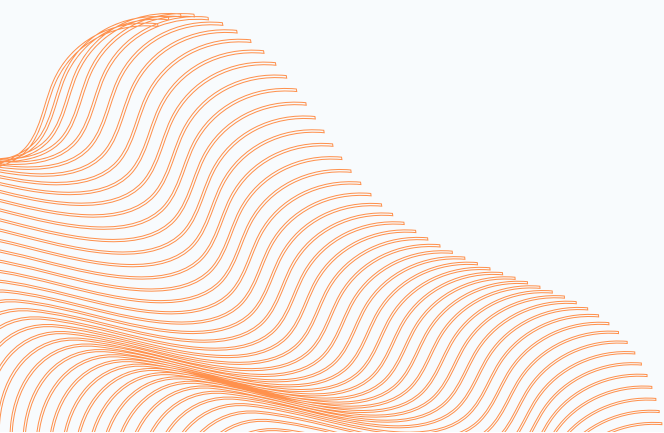
SURVEY RESULTS

Do you use music or white noise to study? 111 ⓘ

Q10 - Do you use music or white noise to study?	Percentage	Count
Yes, I listen to normal music	36%	40
Yes, I listen to lo-fi music (instrumental music without words)	35%	39
Yes, I listen to white noise	7%	8
No, I do not use music or noise while studying	22%	24
Sum	100%	111

When asked whether they do or do not use music or white noise while they study. 36% of college students say they do listen to normal music while they study and 22% say they do not listen to music or any noise while they study.

- The Apple Vision Pro has speakers installed on each side for the user providing Spatial Audio that can also keep you aware of your surroundings.

INTERVIEWS

Are you willing to conduct a short interview for our research? 111 ⓘ		
Q12 - Are you willing to conduct a short interview for our research? - Selected Choice	Percentage	Count
Yes. (Please leave your email below)	36%	40
No	64%	71
Sum	100%	111

At the end of the survey, we offered a follow-up option for any participants who were open to being interviewed in a 6-question phone call interview to further discuss their personal study experiences. Our 8 participants were chosen at random from the individuals who agreed to the interview and had shared their email. This interview was structured exactly the same for each individual to capture their means of studying, the advantages and disadvantages they believe technology offers to their studies, as well as what changes they'd like to see made to best improve their study struggles.

PARTICIPANT 1

What do you use to study?

"I think in undergrad I used my textbook a lot, and I'm a very pen-and-paper type of person, so I can definitely take notes on my computer, but that didn't let me memorize or read the content. I would just grasp, like, whatever the content was, so I would draw pictures, I would draw notes, and kind of do visuals of it. I think undergrad was very pen and paper and on my laptop a lot, but since there's a lot of textbook reading in grad school, it was just easier to use my iPad. So, I think as the years have changed throughout my education, I've shifted into different ways of learning."

In what ways does technology help you study?

"Voice recordings or using study apps like Quizlet or, KY, Khan Academy. Websites where you could watch videos, like YouTube, those kinds of things. I think technology has been like a cheat sheet for me since I'm able to look online and get a quick grasp of whatever I'm studying. Even now in grad school, if I'm reading something and I just don't understand something, I'll look it up on YouTube real quick. I've definitely used Quizlet before, it just doesn't do it for me. I just need a physical copy if I'm doing anything like that. I think technology has just helped in the sense of organization as well. It's easy to keep everything organized within your computer."

How do you think technology could help you study better?

"I just don't think I'm a Quizlet type of person, because I really need to write things to memorize it. I think a unique way technology could help would be If there's a way that your computer could generate what you're saying with your voice and then respond to it and basically quiz you on the information. So like in a world where that existed is your idea of using it as like a way to study more of like a voice recognition."

Are there any frustrations you've faced with your studying?

" I think as I was an undergrad it was understanding that every teacher teaches in a different way. now going through undergrad and my first master's and now to my second just became easier to transition into understanding someone's teaching style."

What do you wish you could do?

"I wish that all digital textbooks had a function that could read you, like an audiobook. I also wish I had an accessible library or an area where I could sit down on campus and do work where it's not like I have to be at home and try to focus without all the distractions at home."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"I think my goals are just to get the work done. I definitely make sure to add when things are due on my calendar. I wish I had just more of a retreat location where I could do my work and then give me that a lot of time to like be there and then go home."

PARTICIPANT 2

What do you use to study?

"I like to write out a study guide and like just pen and paper and then also use, um, like flashcards."

In what ways does technology help you study?

"So I think, for example, studying for the MCAT, there's so much content where I can't do everything with just paper. So I have been using Anki, and Anki's been really great and Quizlet lives on a web browser. If Quizlet was an app, that would be a lot better, because the fact that it lives on my browser is really distracting. Whereas Anki, it's an app on my MacBook, which is really nice. And, obviously, just turning on Do Not Disturb helps me study."

How do you think technology could help you study better?

"I think rather than building study decks on my own, if there are study decks that people have already made in the past and I can reuse that, I think that's where technology can be really helpful because I wouldn't have to waste my time just making it and then using that to study. I know Quizlet has that functionality, that features built-in because I've used other people's decks before. So, that definitely is very helpful."

Are there any frustrations you've faced with your studying?

"If I was just given, like, an open-ended question, and, like, I have to recall specific words or definitions, that's, like, the hardest part of studying. While studying, like having to try to memorize everything. Not only just understanding it."

What do you wish you could do?

"Learn and then you wanna be able to memorize it. I wish I could not have to, like I don't want to spend time studying, but be able to decrease the amount of studying and get as much done as I would."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"I think time isn't a great way for me to set goals, I like setting benchmarks based on the content that I need to study."

PARTICIPANT 3

What do you use to study?

"it's kind of weird for me because like, depending on the class, the study strategy can be like, Totally, totally different. I'll usually make the flashcards because they have space repetition, which helps a lot in learning the stuff and sort of tying things together."

In what ways does technology help you study?

"technology is pretty much, like, everything that I do nowadays. Just as an organization tool, because it's easier to have a thousand notes on one tablet than to have a thousand physical notes. I think I use technology both as an organizational tool and for the things that you can do with screens that you can't do with paper"

How do you think technology could help you study better?

"With technology, we can annotate our slides directly, sort of make those connections on the spot, write them down and sort of speed up that process a little bit and just streamline learning, streamline studying, and make it more efficient in general. That way you're not just reviewing the notes to make connections, but you're actually understanding what's going on."

Are there any frustrations you've faced with your studying?

"Like, iPads die, laptops die, my Apple Pencil stops working every now and then, stuff like that.

What do you wish you could do?

"A lot of study apps, they don't work unless you're online, it's kind of pointless."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"I'm definitely a, very much a serial procrastinator, I'll usually wait until the last couple of, like, days or last couple hours to study, and at that point, there's really no study plan. Sort of like milestones in my studying, but beyond that, no, I don't really set any specific goals.

PARTICIPANT 4

What do you use to study?

"I typically will use my notes and I'll often go through and rewrite my notes. So I'll like maybe like read my notes, read a textbook. I do read the textbook a lot. Then I'll just practice a lot of my problems."

In what ways does technology help you study?

"So I often struggle to understand the why. I will Google or when there's an online textbook. So I really to help understand the learning the why behind things.

How do you think technology could help you study better?

"I feel like I definitely could take more advantage of different online sources, like Quizlet and other websites that like help you. I' m a visual learner, I like to be able to see what I'm psychically learning.

## Are there any frustrations you've faced with your studying?

"not knowing what's going to be on your test. When you get so many concepts, you don't really know, like what exactly to focus on in your timeline."

What do you wish you could do?

"I wish there could be somewhere that could help me narrow down on what is really important or not really important to understand. Maybe there should be an app that helps you determine how you best study. "

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"I will always set like a timer for an hour and I will just not pick up my phone. I might be like, 'Okay, I'm going to finish having one through five before I take a break'."
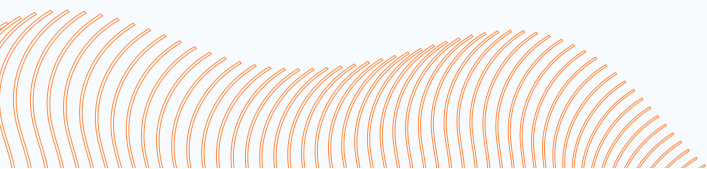
PARTICIPANT 5

What do you use to study?

"I use Google Docs to create study guides most of the time. I also use Google Calendar to help keep all my assignments and exams in order. And I set up the days and times that I devote to studying, and that helps keep me balanced and on track."

In what ways does technology help you study?

"It's best with reminders. It reminds me when I have to study what I study for, and it takes a lot of the stress out of having to check."

How do you think technology could help you study better?

"I think technology could make my study guides for me and take all the hassle out of having to summarize work. I also think technology can better help me with my motivation to study.

Are there any frustrations you've faced with your studying?

"I procrastinate a lot. And I just miss a lot of my study reminders. And I don't use, I don't look at my calendar as much as I should."

What do you wish you could do?

"So something that could help me would be if I could just look at my phone and have all my assignments there, every time I open my phone. I think that would really make studying and keeping up with my schedule so much easier for me."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"Yes, I often try to get most of my work done in one sitting. A goal that I would like to start setting is to start studying much earlier for my exams. That way I don't need to cram any material."

PARTICIPANT 6

What do you use to study?

"I have an iPad that I kind of take my notes on, but for the most part, I usually take most of my assignments from ELC and I upload them to OneDrive so I can annotate on my iPad."

In what ways does technology help you study?

" I would say it's very helpful because I like to go on Quizlet and stuff to make flashcards. I would just kind of like to go over my notes on my phone and my iPad since OneDrive is connected to both of those."

How do you think technology could help you study better?

"Technology could help me study better if I was more proactive and also like keeping up with assignments and my readings. I have a calendar that I use to put in due dates and I usually set a reminder a week ahead of time or a few days ahead of time."

## Are there any frustrations you've faced with your studying?

"Sometimes I will be working on an assignment and then suddenly the Wi-Fi goes out and then I can't load it up. But, I do a lot more research these days, like, read a couple of articles and write something about it."

What do you wish you could do?

"Since the computer I have is not an Apple product sometimes I wish that my computer and my iPad could sync up so I could be able to have two working screens whenever I'm out and about.

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"Well, I have a huge research project due at the end of this semester, so, for the next couple of weeks, for each week, I will be reading each article and writing about two pages on that to crack down on the paper."
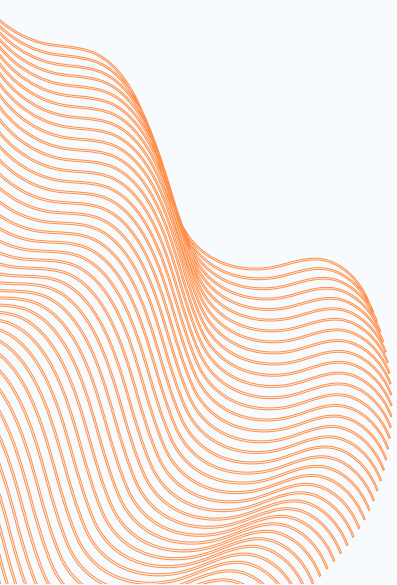
PARTICIPANT 7

What do you use to study?

"So, a lot of my studying is just going back through my slides and using my iPad to take notes and study for the MCAT. I use programs like Anki, Khan Academy videos, and I use Quizlet as well.

In what ways does technology help you study?

"Technology is integral to how I study. I could not use any of the methods that I do without it. I don't just take notes in class anymore, I just write over the slides on my iPad and audio record lectures. With Anki and Quizlet, just being able to connect with other students who have taken a course or studied for the MCAT and being able to revise flashcards made my other students helps me a lot."

How do you think technology could help you study better?

"I feel like the study room locator that they're starting, um, I have a difficult time studying at home and so I really like to go on campus to do work and like using technology to even know when a study room is open."

Are there any frustrations you've faced with your studying?

"I do find it really frustrating when there's like distracting ads on a site that's supposed to be used for studying. I also think it can be kind of frustrating for students to not have free access to everything because sometimes online resources can be really costly."

## What do you wish you could do?

"I think noise canceling headphones are great at canceling out like the noise of the air conditioner but they have not gotten to a point where they're able to cancel out some conversations that fluctuate in people's voices. So I guess I'm looking for improvements in sound cancelling technology because I personally have a really hard time not eavesdropping on people's conversations a a distraction."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"I study a lot every day. I used to have a paper planner to plan out my study sessions, and I found myself setting pretty unrealistic goals. So now, I use the task feature on Google Calendar, and I set like every task that I have to do that day into a specific time block. Because I don't have time to carry a paper planner everywhere that I go, but this is on every single one of my devices."

PARTICIPANT 8
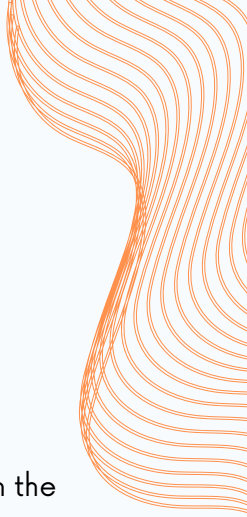
What do you use to study?

"I usually rewrite my notes from my class on my iPod and I use Quizzlet, to refresh my brain the day of."

In what ways does technology help you study?

"Personally, I use my iPad. It helps me study because I can write all my slides and I feel like I can be creative and use colors, plus it is a lot easier to erase things on my iPad than on paper."

How do you think technology could help you study better?

"Maybe having like different AI features where I could like to speak things, like accurately transcribed."

Are there any frustrations you've faced with your studying?

"I like studying in a silent place by myself, but it's extremely, hard to get one of the quiet rooms in MLC. And leaving the parking lot at night can get scary."

What do you wish you could do?

"Maybe like something where like, if I put a PowerPoint from a class into AI and they generate notes for me instead of having to do it myself."

Do you set specific goals for your study sessions? If so, what are they? If not, what are some you'd like to set?

"Usually I do. I try to break up the material like. Two weeks before a test, I'll like break up the material on planet. And to like days before the test and figure out. Like how much you need to accomplish. Or to be prepared."

KEY FINDINGS

- Most college students prefer not to study in their personal space but only do so because they lack the ability to comfortably study in common areas without distractions and travel complications.
- Although many college students mentioned various preferred methods of studying the most preferred is revising their notes.
- Most college students use the Do Not Disturb function because they find their biggest distraction while studying is receiving phone notifications.
- Most college students struggle with procrastination and struggle to find a study tool that gives them reminders and effectively holds them accountable for their tasks.
- Quizlet is a much-preferred study tool because it offers access to past 'students' study guides.

MOVING FORWARD

Based on the data we have collected, our strategy moving forward involves leveraging the obstacles that hinder college students' academic pursuits and emphasizing the aspects they prioritize most in their studies. In doing so, we plan to offer features that will best advance their focus and influence their ability to memorize the general concept of their material. With the ongoing development of TRANQUIL, our goal is to provide a comprehensive learning experience, motivating users to maintain consistent, and goal-oriented study habits. As our research continues, we will remain committed to seeking and incorporating feedback to further refine the design and concept of TRANQUIL.

SOURCE

https://developer.apple.com/design/human-interface-guidelines/immersive-experiences#Immersion-and-passthrough

https://www.apple.com/apple-vision-pro/