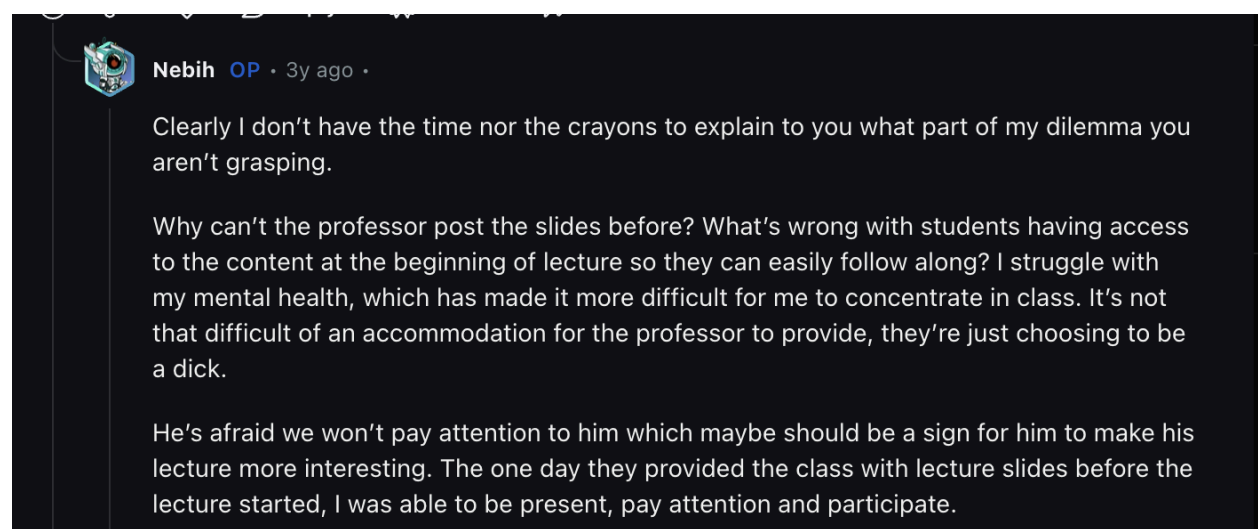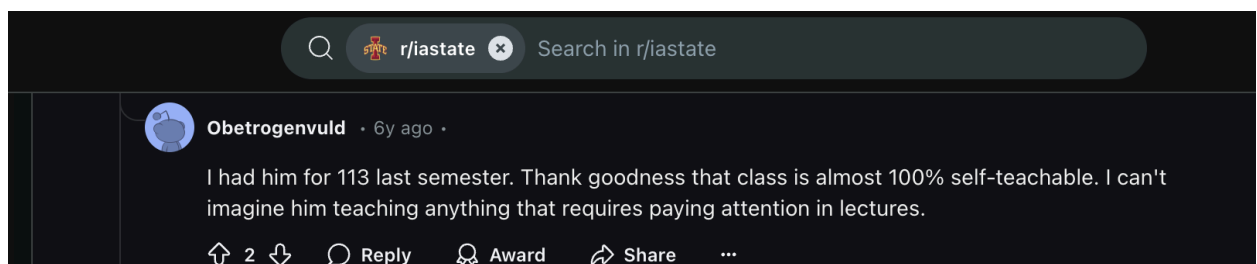**Problem Statement**

Traditional learning methodologies are rooted in a one-size-fits-all approach, which fails to address the diverse needs of learners. In in-person settings, students often rely on a single method of instruction: attending lectures, listening to explanations, and taking notes.

While this works for some, it leaves many disengaged and struggling to keep up. Online learning, though more accessible, often mirrors this rigidity by presenting static resources like PDFs, documents, and pre-recorded videos. These methods lack personalization and fail to adapt to the learner's unique style or pace.

The issue is clear: not everyone learns the same way. Some people are visual learners who benefit from diagrams and illustrations, others are auditory learners who need to hear explanations, while some thrive through discussions, hands-on practice, or real-world application. Without personalized support, learners face challenges in understanding, retaining, and applying knowledge effectively.

This gap in traditional and online education methods leaves many learners frustrated, disengaged, and unable to realize their full potential. Solving this problem requires a learning system that recognizes and adapts to the individual needs of each learner, ensuring they are taught in a way that resonates with them.

Student Insights Data (Reddit)

🔒 I dont learn anything from my classes

NYeagle   Mar 2008

<p>I want as much as help possible so i am posting another thread here.</p>

<p>Guys, I have serious problem. You see, I go to physics class and I do all the homeworks. But when I study for my exam, nothing from my notes help me. The teacher goes through basic stuff. I have to start from the beginning by reading everything and solving examples. The homeworks are ridiculously hard so i have to get aide from someone. I recently bought a book with solutions to all its problems, but I dont know if doing each problem (around 120 per chapter) will help if I just look at the answers when i get them wrong.</p>

<p>I think I only go to class for attendance, the same is the situation with my programming class. The teacher goes through code, and I cant ask a question because I had a problem with an earlier concept. And the list goes on.</p>

<p>I recently scored amazing low on my physics mid term. Teacher said I should have done better, he was VERY surprised. Did i mention I ALWAYS sit in the front of the class?? </p>

<p>My friends would ask me questions, they have 90's. They really make feel ■■■■■■■■ when i get any lower than them. I had a 91 on my math, they had 93+ so i felt ■■■■■■■■., I am here lurking in the 60's with the physics midterm. Its so embarrassing i cant even discuss it anyone, so i had to post it here on cc. Thanks again for any help.</p>

Same Class, Different Experience Data (Rate My Professor)

"Learning isn't a one-size-fits-all journey. Two students can take the same class and have vastly different outcomes based on how the material is presented and how they process information. These contradictions highlight the need for a more personalized approach to education."

QUALITY	COMS363		Oct 25th, 2023

1.0

DIFFICULTY

3.0

For Credit: **Yes**   Attendance: **Mandatory**   Grade: **A**   Textbook: **N/A**

This class is another example of why you should avoid taking COM S classes at ISU. The homework is given with little to no instruction or documentation or the projects don't relate to anything we spoke about in class or industry. Her slides and lectures are useless, and the only reason to show up is for attendance. Also, the grade scale is broken.

QUALITY	COMS363	Dec 18th, 2021

5.0

DIFFICULTY

3.0

For Credit: **Yes**   Attendance: **Mandatory**   Would Take Again: **Yes**   Grade: **C-**

Textbook: **No**

Professor Li is a solid professor for Com S 363. Her lecture slides might not make the most sense but the biggest help is the homework's and the practice materials. She gives practice materials that really do help if you study them. She keeps her word, as the practice exams she gives do look some what similar in most cases to the exams you receive.

QUALITY

1.0

DIFFICULTY

3.0

COMS363   Nov 29th, 2023

For Credit: **Yes**   Attendance: **Mandatory**   Grade: **A-**   Textbook: **N/A**

As a third-year Software Engineer at ISU, this is easily the worst professor I have ever had. She is a good human, but teaching may not be her calling. She often gets confused about her work in lectures, the study guides are largely irrelevant, and the homework/projects often don't relate to anything we talked about in class or in industry.

QUALITY

4.0

DIFFICULTY

2.0

COMS363   Nov 9th, 2023

For Credit: **Yes**   Attendance: **Mandatory**   Would Take Again: **Yes**   Grade: **B+**

Textbook: **N/A**

Knows what she's talking about in Lecture and her slides are good study material for the exams and quizzes. All of the quizzes were open-note and all the answers were in the slides. Homeworks are also often assigned weeks ahead of time so you have plenty of time to do them.

Proposed Solution 1 : Personalized Learning Platform

Overview
The solution aims to revolutionize traditional learning by offering a highly personalized learning experience tailored to each user's unique preferences, learning styles, and challenges. By leveraging AI, user data, and integration with popular course platforms, we provide a dynamic, customized pathway for students to succeed in their courses.

How It Works

Seamless Integration:

- Users can connect their courses to our platform through:
- A dashboard where they import courses from platforms like Canvas, Udemy, Coursera, etc.
- A browser extension that activates while users engage with their course content online.

Personalization Setup:

- Users fill out a personality survey to help the platform understand:
- Their preferred learning styles (e.g., visual, auditory, hands-on).
- Their strengths, weaknesses, and challenges (e.g., procrastination, retention struggles).

AI-Driven Content Adaptation:

- The platform analyzes the course material and adapts it to the user's preferences:
- Converts course sections into videos for visual learners.
- Summarizes content into audio formats for auditory learners.
- Creates quizzes, flashcards, or games for hands-on learners.

Gamification and Engagement Tools:

- Daily streaks, reminders, and rewards (similar to Duolingo) keep users on track.
- AI recommends specific actions to help users overcome procrastination or stay consistent.

Real-Time Interaction:

- For users engaging directly with content via the extension, AI performs web scraping to extract course material and transform it into digestible formats (e.g., voiceovers, videos).
- The AI acts as a personalized tutor, delivering content in ways that resonate with the user's unique preferences.

Key Features

Personalized AI Tutor:
- Learns the user's preferences and tailors the delivery of course content accordingly.
- Offers flexibility in learning formats (e.g., video summaries, audio lessons, gamified challenges).

Course Material Optimization:

- Integrates seamlessly with external platforms to analyze and repackage course content.
- Provides context-specific guidance for each section of the course.

Adaptive Engagement:

- Tracks user progress and adapts the approach based on real-time feedback.
- Encourages consistency with gamification elements like streaks, coins, and achievements.

Benefits

Personalized Learning: Eliminates the one-size-fits-all model, making education accessible and effective for all types of learners.

Convenience: Allows users to study their way, whether it's through a dashboard or directly with an extension.

Increased Retention: Presents content in a format that enhances understanding and memory based on the user's preferences.

Actionable Learning: Helps users stay engaged and complete their courses with tailored strategies.

Core Principle
"Learn the way you want."
The platform focuses on delivering course material in formats that work best for the individual, ensuring they have the tools and support to succeed, no matter their learning style.