

Cipherbot



Inspire inquiry and foster understanding through an
AI enhanced classroom

<https://cipherbot.qcri.org>

Challenges in Traditional Classroom Learning



Introvert students

Students hesitate to actively participate or express themselves



Limited teacher availability

Teachers often struggle to provide individualized attention



Dynamic learning stages

Students progress at different rates. difficult to design a one-size-fits-all learning plan



Varied learning preferences

Students have diverse preferences for how they consume and retain information



Cipherbot: AI-Powered Transformation of Learning

Empowering Introverted Students

- **AI-Driven Personalization:** Adapts content, pace, and feedback to individual progress, enabling introverts to learn confidently in a low-pressure, self-paced environment.
- Offers a supportive, judgment-free space with multilingual AI tutoring available 24/7, breaking down social and language barriers.

Adapting to Dynamic Learning Needs

- **AI-Driven Scalability:** Dynamically adjusts learning paths to accommodate each student's unique pace, promoting steady progress from foundational to advanced concepts.
- Encourages lifelong learning by fostering curiosity and self-directed growth beyond formal education.

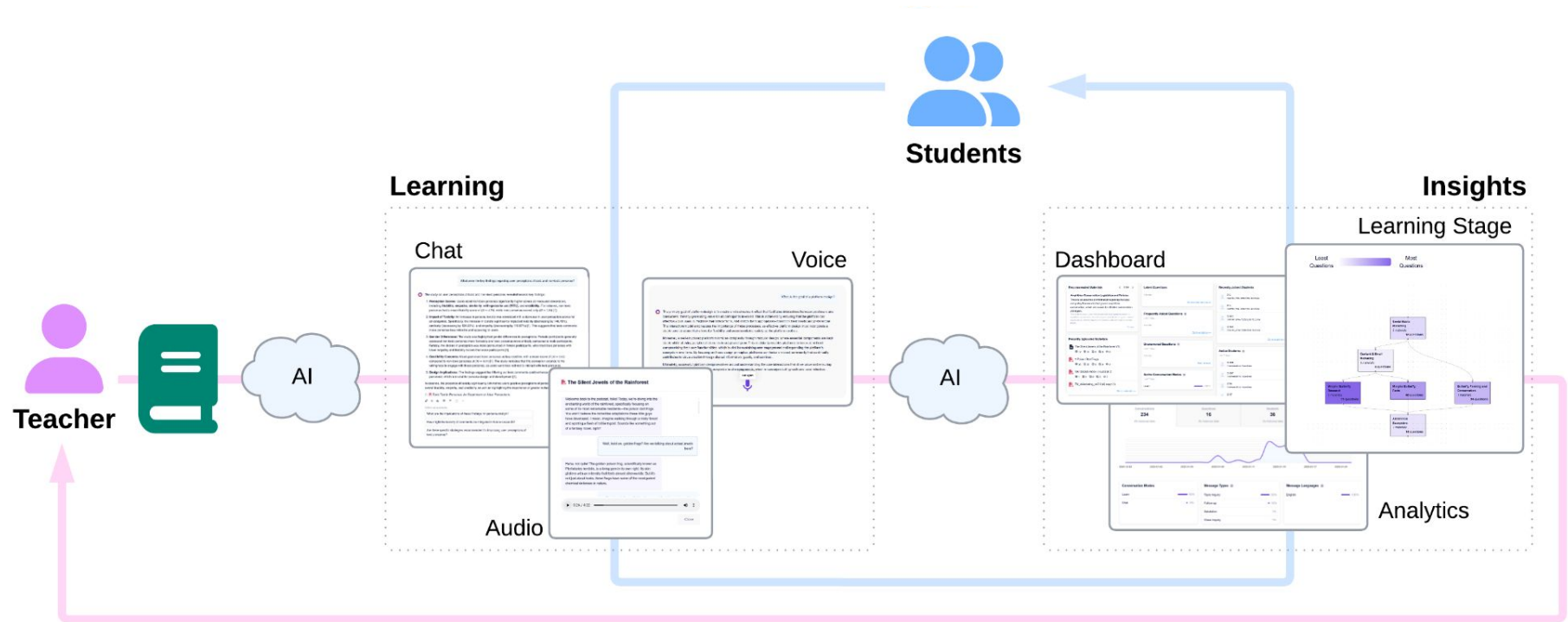
Enhancing Teacher Support

- **AI Assistance:** Provides consistent, high-quality tutoring round the clock, ensuring students get the help they need even when teachers aren't available.
- Frees teachers to focus on essential tasks by handling individualized support for students at varying levels of understanding.

Catering to Diverse Learning Preferences

- **Personalized Education:** Leverages AI to deliver resources in multiple formats—audio, text, and interactive sessions—ensuring students learn in ways that suit them best.
- Enables seamless, personalized interactions that adapt to each learner's goals and preferences.

How it works?



Class

- **Enable Private Class:** Only teachers can add students; students cannot join on their own. Added students will automatically see the class in their list.
- **Disable Text Input:** Students can only use AI Speech; text input is disabled.
- **Enable Speech to Text:** AI transcribes students' spoken audio to text in the class chat.
- **Enable Text to Speech:** AI converts Cipherbot messages into lifelike speech.
- **Enable Learn:** Students can explore specific topics or concepts in depth.
- **Enable Follow-up Questions:** Students receive follow-up questions related to their queries.
- **Enable Recommended Questions:** AI generates recommended questions from class materials.
- **Enable External Knowledge:** Cipherbot provides answers using external knowledge when class materials lack information (accuracy not guaranteed).
- **Enable Sub-Class and Class-Limited Student Account Management:** Manage sub-classes (subjects) and student accounts, allowing students access to all subjects within the class.
- **Customizable Chat Greeting**
- **Customizable Chat Guideline**

Class - Add

School Level *

Grade

School Year/Semester

Advanced Settings

Enable Private Class
☐ Only teachers can add students to this class. Students cannot join on their own. Added students will automatically see the class in their list.

Disable Text Input
☐ Students will only have the option to use AI Speech when you choose to disable text input

Enable Speech To Text
☒ Students will have an AI Speech feature that accurately transcribes their spoken audio to text within the class chat

Enable Text To Speech
☒ Students will have an AI Speech feature that converts Cipherbot messages to lifelike speech

Enable Learn
☒ Students will have a Learn feature to explore more about specific topics or concepts

Enable Follow-up Questions
☒ Students will have follow up questions related to the response they got for their question

Enable Recommended Questions
☒ Students will have AI-generated recommended questions from the class materials uploaded

Enable External Knowledge
☐ When answers cannot be found in the provided materials, CipherBot will use external knowledge based on the training data of the LLM. Be aware that this feature may not guarantee the accuracy of the information provided

Enable Sub-Class and Class-Limited Student Account Management
☐ For overseeing younger students, this allows to manage sub-classes (subjects) within the class and student accounts. Students will have access to all sub-classes (subjects) within the class

Chat Greeting

Hello

Chat Guideline

Do you have any questions regarding the class or the materials?

Close

Save



Material

- **Allowed Formats:** txt, html, md, pdf, docx, pptx, wav, mp3, m4a
- **Upload Quota:** 100 materials per class, 100 for self-study classes
- **Tags – Theme & Lecture Date:** Used for filtering and targeted search
- **Visibility Settings:** Materials can be hidden from students. Only references (e.g., title, metadata) will be visible.

Material - Upload

Choose Files

No file chosen

Max file size: 10MB (general), 30MB (audio)
Allowed formats: .txt, .html, .md, .pdf, .docx, .pptx, .wav, .mp3, .m4a
Remaining quota: 98

Theme

Lectured on
dd/mm/yyyy

Viewable

Disable to restrict access to this material intended solely for teachers, ensuring that students cannot view them even if Cipherbot can derive answers from the content

Close

Save



Chat

- **AI-Generated Recommended Questions:** Students can kickstart conversations with automatically suggested questions, making it easier to engage with the material.
- **Reference-Backed Responses:** provides answers supported by references from the teacher's materials, ensuring accuracy and relevance.
- **Follow-Up Question Suggestions:** determines logical follow-up questions and displays them to guide students through deeper exploration of the topic.

Chat

Hello Soon-gyo!

Do you have any questions regarding the class or the materials?

What are the methods used in traditional statistical analysis?

List and describe the essential elements to consider when selecting a social media analytics tool.

Illustrate the techniques that can be used for basic image analysis and advanced video analysis.

What are the most widely used social media analytics methods?

Type a message

Chat

Search

List and describe the essential elements to consider when selecting a social media analytics tool.

- When selecting a social media analytics tool, several essential elements warrant careful consideration:
1. **Sentiment Analysis:** This feature helps identify the emotions and opinions expressed in social media content. Understanding sentiment can inform marketing strategies and messaging [1].
 2. **Emotion Analysis and Effort Scoring:** These metrics provide deeper insights into how users feel about your brand or campaigns, revealing the emotional connections that can affect consumer behavior [2].
 3. **Segmented Data:** A robust analytics tool should allow users to segment their audience based on demographics such as age, gender, and location, as well as engagement metrics like likes and shares. This segmentation enhances targeting and content personalization [2].
 4. **Dashboards and Visualization:** Effective analytical tools should offer user-friendly dashboards that allow for the easy presentation of data in graphical formats. This capability aids in quickly identifying trends and making comparisons [3].
 5. **Operational Data:** Incorporating operational data enables linking social media metrics with other business metrics, like sales and web traffic. This integration can lead to actionable insights that optimize strategy and help achieve KPIs [1].
 6. **Multiple Platform Analysis:** Given that businesses often maintain a presence across various platforms, an effective tool needs to connect and analyze data from all relevant social media accounts to provide a comprehensive view of engagement and reach [1].

Incorporating these elements ensures that marketing teams can derive meaningful insights from their social media activities, optimize their strategies accordingly, and ultimately improve their engagement with target audiences [2].

- [1] Social Media Analytics: Methods and Tools
- [2] Understanding Web and Social Media Analytics Strategy
- [3] The Foundations of Social Media Analytics

Follow-up questions

What are the advantages of using dashboards in social media analytics?

How can segmented data improve marketing strategies?

What role does operational data play in social media analytics?

Type a message

Chat

- **Chat Modes:** adapts its responses and interaction style based on the selected chat mode, providing tailored learning experiences for each scenario.



Foster smooth knowledge exchange through questions and answers

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Engage in iterative refinement to enhance the quality of homework

Hello Soon-gyo! It's great to connect with you. I'm here to help you refine your work and reach your academic goals. Could you please share more about your current project or area of focus? What are you aiming to achieve with your work?

List and describe the essential elements to consider when selecting a social media analytics tool.

Thank you for sharing your request. Soon-gyo! When selecting a social media analytics tool, several essential elements should be considered to ensure you choose the tool that best fits your needs.

First, the ability to analyze multiple social media platforms is crucial. As businesses often maintain a presence across various channels (e.g., Facebook, Instagram, Twitter), the selected tool should integrate seamlessly with all accounts to provide a comprehensive view of engagement and reach across platforms. This holistic perspective helps in understanding how messages resonate with audiences on each platform, thereby guiding content optimization strategies [1].

Next, the inclusion of dashboards and data visualization capabilities is vital. Effective dashboards simplify complex data analysis and communication. By presenting data visually, teams can quickly identify trends, patterns, and outliers, making it easier to derive actionable insights from the analysis [2].

Segmented data is another key element to explore. A robust analytics tool should categorize social media followers into segments based on demographics or engagement metrics. This segmentation allows marketers to tailor content more effectively to meet specific audience preferences [3].

Additionally, incorporating operational data is essential for a comprehensive analysis. The selected tool should enable users to connect social media data with operational metrics like sales and website traffic. This integration supports a nuanced understanding of how social media impacts overall business performance and customer behavior [3].

Lastly, consider tools that provide sentiment and emotion analysis capabilities. These features can deepen insights into audience attitudes and feelings about your brand or products, enhancing your ability to respond effectively to customer needs and sentiments [1].

In summary, when selecting a social media analytics tool, focus on multi-platform analysis, data visualization, segmented data, operational data integration, and sentiment analysis capabilities. Each of these elements contributes to a more effective understanding of your social media performance and audience engagement.

If you need further clarification or have additional questions, feel free to ask!

[1] Social Media Analytics: Methods and Tools
[2] Understanding Web and Social Media Analytics Strategy
[3] The Foundations of Social Media Analytics



Stimulate critical thinking through problem-solving and feedback

List and describe the essential elements to consider when selecting a social media analytics tool.

Soon-gyo, let's explore the essential elements to consider when selecting a social media analytics tool. To start, what do you currently know about social media analytics tools and their functionalities?

After you provide your thoughts, I can elaborate on key components such as sentiment analysis, emotion analysis, and segmented data. These elements are crucial because they help businesses assess user interactions across various platforms. For instance, sentiment analysis allows you to gauge the emotional tone behind social media conversations, while emotion analysis can delve deeper into specific feelings expressed in user-generated content.

Furthermore, segmented data can categorize your audience based on demographics, behaviors, and engagement metrics. This can illuminate which groups resonate most with your content and help tailor marketing strategies effectively.

Dashboards and visualization are also critical components; they provide intuitive interfaces to present complex data in visual formats, making insights easier to digest and share with teams. They enable quick comparisons among datasets and can highlight key trends or anomalies.

Lastly, the incorporation of operational data is vital. By aligning social media performance with other key performance indicators (KPIs), you can draw correlations that enhance your understanding of customer interactions and optimize resource allocation effectively [1][2].

What do you think is the most important aspect when evaluating these tools?

[1] Social Media Analytics: Methods and Tools
[2] Understanding Web and Social Media Analytics Strategy



Ask questions based on a selected or uploaded learning material for targeted insights

Focus

Select or upload learning material ⓘ

Material

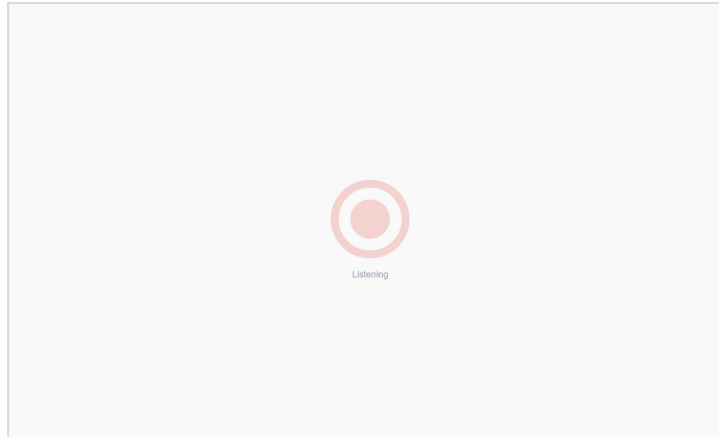
Or

No file chosen

Max file size: 5MB (general)
Allowed formats: .txt, .html, .md, .pdf, .docx, .pptx

Voice Chat

- **Seamless Hands-Free Learning:** Students can ask questions and receive clear, conversational answers through voice interaction.
- **Inclusive and Accessible:** Supports visually impaired users and enables multitasking, making learning possible anytime, anywhere.
- **Natural Engagement:** AI processes speech and responds in dialogues, creating an interactive and immersive experience for students on the go.



What is the goal of a platform design?

🔗 The primary goal of platform design is to create a robust network effect that facilitates interactions between producers and consumers, thereby generating value for all participants involved. This is achieved by ensuring that the platform can effectively pull users in, facilitate their interactions, and match them appropriately based on their needs and preferences. The interaction model emphasizes the importance of these processes, as effective platform design must incorporate a stable core structure that allows for flexibility and accommodates variety as the platform evolves .

Moreover, a well-structured platform minimizes complexity through modular design, where essential components are kept stable while allowing peripheral elements to adapt and grow. This modularity enables platforms to innovate without compromising their core functionalities, which is vital for sustaining user engagement and expanding the platform's ecosystem over time. By focusing on these design principles, platforms can foster a vibrant community that continually contributes to value creation through shared information, goods, and services .

Ultimately, successful platform design revolves around understanding the core interactions that drive value and ensuring that the system is user-friendly and adaptable to changing needs, which encourages both growth and user retention .

Ask again

Audio Speech

- **Customizable Speech Styles:**
Teachers can choose from various speech styles (e.g., lecture, lecture with student questions, podcast, or discussion) to match students' learning goals and preferences. Cipherbot then generates scripts, audio, and captions.
- **Enhanced Auditory Learning:**
Students can listen to material-related content, ideal for those who prefer auditory learning.
- **Learning on the Go:**
Provides students the flexibility to learn while commuting, walking, or jogging, making education accessible anytime, anywhere.

Based Material

Lecture

A teacher delivers a solo lecture

Lecture with Questions

A teacher lectures with a student asking questions

Podcast

Two speakers introduce topics conversationally

Discussion

Two students engage in a topic discussion

Gender of Speaker 1

Female

Male

Approximate duration of the speech

3-5 minutes

6-10 minutes

11-15 minutes

Language for speaking

English

Arabic

Finnish

Korean

Vietnamese

Chinese

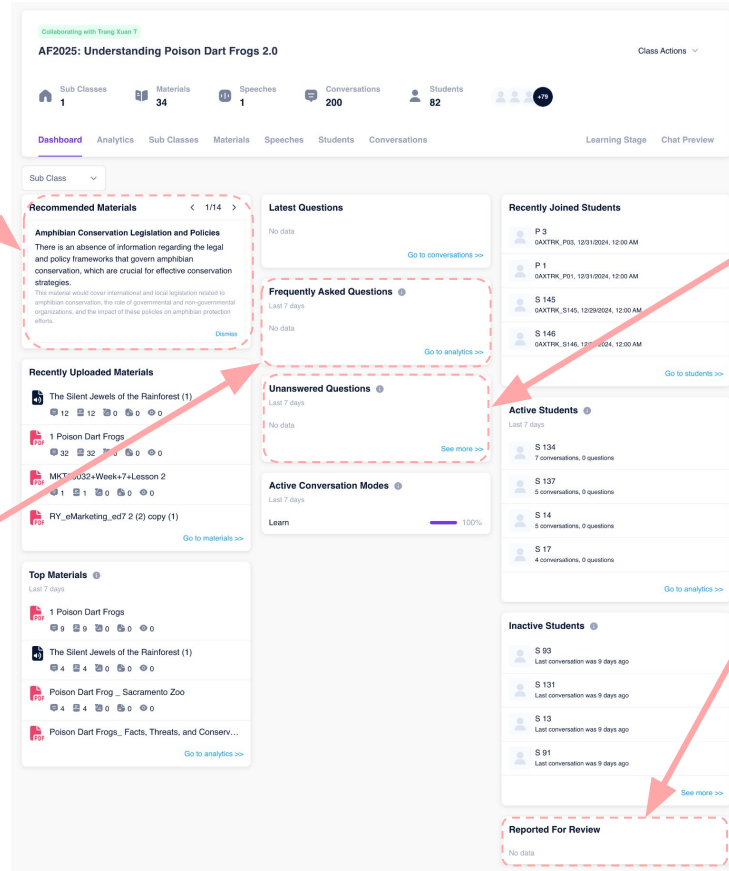
Close

Create

The image shows a podcast player interface. At the top, there's a header with a red 'PDF' icon and the title 'The Silent Jewels of the Rainforest'. Below the header, the main content area is a light blue box containing a transcript. The transcript starts with 'Welcome back to the podcast, folks! Today, we're diving into the enchanting world of the rainforest, specifically focusing on some of its most remarkable residents—the poison dart frogs. You won't believe the incredible adaptations these little guys have developed. I mean, imagine walking through a misty forest and spotting a flash of brilliant gold. Sounds like something out of a fantasy novel, right?' This is followed by a dashed-line box containing the text 'Wait, hold on, golden frogs? Are we talking about actual jewels here?'. Below that, another light blue box contains the text 'Haha, not quite! The golden poison frog, scientifically known as Phylllobates terribilis, is a living gem in its own right. Its skin glistens with an intensity that feels almost otherworldly. But it's not just about looks; these frogs have some of the most potent chemical defenses in nature.' At the bottom, there's a dark blue player bar with a play button, a progress bar showing '0:26 / 4:22', a volume icon, and a 'Close' button.

Dashboard (Teacher)

- **Recommended Materials:** Cipherbot regularly checks uploaded materials and unanswered questions. If any content gaps are identified, it suggests relevant materials to fill those gaps. It also recommends materials related to unanswered questions, ensuring students get all the answers they need.
- **Frequently Asked Questions:** AI automatically groups similar questions and ranks them, providing teachers with insights into the most common student inquiries.

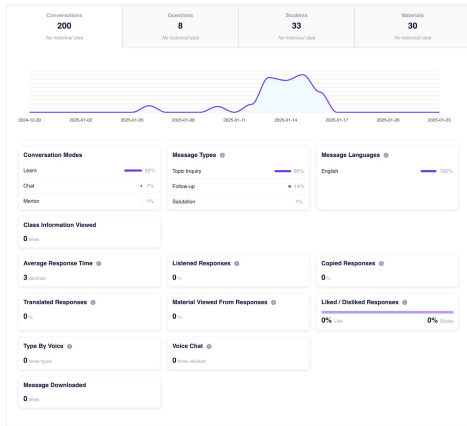


- **Unanswered Questions:** When Cipherbot cannot answer a question, it tags it as "unanswered" and groups these questions for teachers to review. Teachers can then provide direct answers or additional resources.
- **Reported Answers:** If students report inaccurate or ambiguous answers, teachers can review and correct them, ensuring accuracy and improving the learning experience.

Analytics

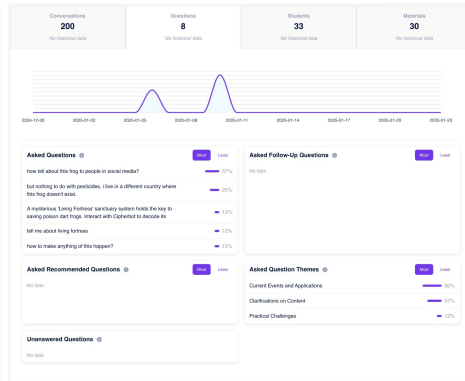
Conversations:

Access engagement and interaction logs to track student participation during conversations.



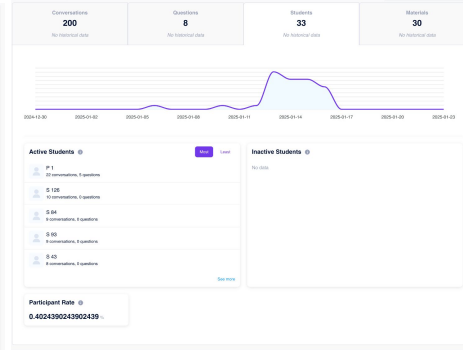
Questions:

View grouped questions, follow-up or recommended questions, categorized themes, and unanswered questions for better insight into student queries.



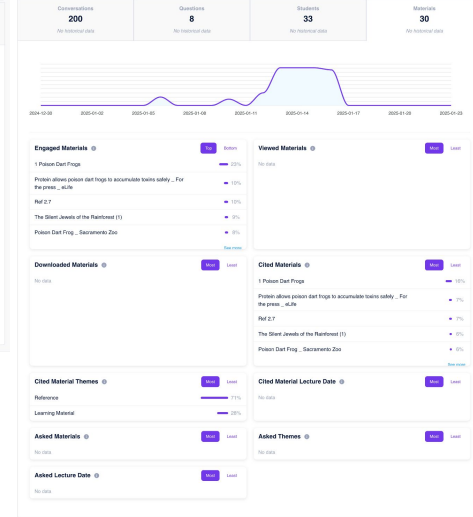
Student Activity:

Monitor student activity by tracking who is active or inactive, helping identify engagement levels.



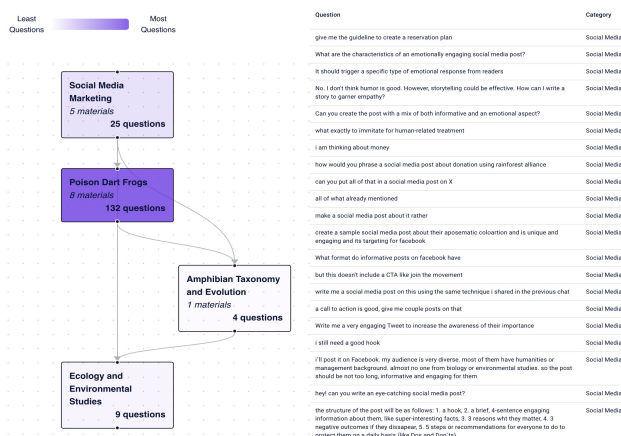
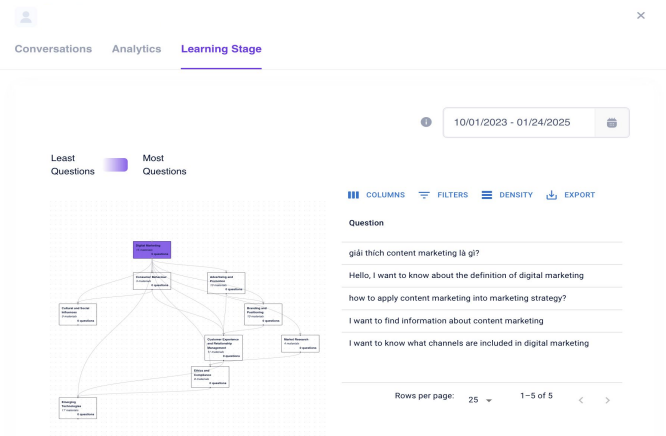
Materials:

Gain insights and logs about the materials that are most engaged with, enabling data-driven decisions for content improvement.



Learning Stage with Knowledge Graph

- **Automated Knowledge Graph Creation:** Cipherbot automatically constructs a multi-layered, directed knowledge graph, organizing class materials from introductory to advanced levels.
- **Mapping Student Questions:** Student queries are automatically mapped to the relevant stage in the knowledge graph, ensuring alignment with their current learning level.
- **Real-Time Progress Tracking:** Both teachers and students can track progress through the knowledge graph, offering a clear view of advancement from one learning stage to the next.
- **Insights for Teachers and Students:** Teachers can view aggregated learning data, while students can monitor their personal progress, providing transparency and alignment in the learning journey.



Consumer Behaviour Lecture 8 – Consumer Decisions and Choices		
added on 09/02/2024		
PDF		
Consumer Behaviour	No theme	
About	Content	Speeches
Conversations		
Analytics		
AI-classified Pathway		
Prerequisites: Consumer Behaviour Lecture 8 - Consumer Decisions and...		
AI-generated Question-and-Answer		
COLUMNS FILTERS DENSITY EXPORT		
Category	Question	Answer
Personas and Consumer Behavior	What is a persona in the context of consumer behaviour?	A persona in consumer behaviour refers to a semi-fictional character that personifies a segment of consumers, representing the ideal customer based on insights like goals, motivations, values, behaviors, challenges, and fears common to that group.
Personas and Consumer Behavior	How are personas developed for consumer segments?	Personas for consumer segments are developed by combining qualitative and quantitative data analysis with creativity to create semi-fictional characters that represent the ideal customer based on various consumer insights.
Personas and Consumer Behavior	Why were animal personas used to develop personas of households?	Animal personas were used to develop personas of households because animal imagery is culture-neutral, age-neutral, and gender-neutral, making it easier for consumers to relate to certain behaviors and traits intuitively without causing offense.
Household Energy Consumer Segments	What are the characteristics of the Ant Colony segment of household energy consumers?	The Ant Colony segment consists of single people and couples with children who have a higher income than the average Australian household. They prefer low-tech and interactive technology solutions, make decisions by a single person in control, and seek assistance when necessary.
Household Energy Consumer Segments	What are the defining criteria and goals of the Beehive segment of household energy consumers?	The Beehive segment consists of couples without children and couples with children with a moderate income. They prefer interactive technology solutions, make decisions either by an acknowledged expert or together, and aim for expertise, control, and ease in their household.

Quotes from Teachers

- Cipherbot acted as a virtual tutor, reducing personal tutoring time for an educator in the Digital Marketing course (Vietnam) **from 20 hours (during the exam) to 1 hour Q&A session.**
- “One thing I really like about it is the text-to-speech. I teach ESL students, so this could really help those students improve their English while they are working on their other subjects.”
- “Cipherbot has been an incredibly valuable tool in my course, helping me gauge areas where students may need additional support. I believe the feedback will provide useful insights into how students are interacting with the platform and any improvements that might further enhance its effectiveness.”



Quotes from Students

- “It [Cipherbot] is a unique experience in that it asks me follow-up questions and keeps me engaged.”
- “I can read less and learn more through this [use of Cipherbot].”
- “It [Cipherbot] behaves like a teacher, engaging in a chat.”
- “I like how it [Cipherbot] can make me understand technical concepts but gauge what I already know.”
- “This is the first time this (potentially AI) tells me to share what I know first.”
- “It feels natural as I am communicating with a mentor.”
- “It is trying to gauge what I already comprehend from the material before giving me an answer.”
- “I like the recommended questions: relevant to my questions but still connected to the course materials, and it comes with citations. Very nice.”



Use Case: Expanding Beyond the Classroom

Trusted Knowledge Source for Stakeholders

- **Document Upload:** Any type of document can be uploaded as a trusted knowledge source.
- **Direct Q&A:** Users can ask questions directly related to the uploaded content.
- **Reliability Assurance:** Responses are strictly based on the provided documents, ensuring no reliance on external sources.
- **Accuracy & Determinism:** Answers are accurate, reliable, and deterministic, based solely on the uploaded content.
- **Eliminating Misinformation:** Reduces the risk of fake or inaccurate information by using only verified documents.
- **Stakeholder Trust:** Ensures stakeholders can rely on information derived exclusively from the trusted content.

Use Case: Preventing Fake News During Natural Crises

Trusted Knowledge Source for Stakeholders

- **Trusted Knowledge Source:** Any type of document related to the crisis can be uploaded as a verified knowledge source.
- **Direct Q&A:** Users can ask questions specifically related to the crisis content provided.
- **Reliability Assurance:** Responses are strictly based on the verified documents, ensuring no reliance on unverified or external sources.
- **Accuracy & Determinism:** Answers are accurate, reliable, and deterministic, based solely on trusted crisis-related content.
- **Eliminating Misinformation:** Reduces the risk of spreading fake news during natural crises by using only verified, factual information.
- **Crisis Communication Trust:** Ensures stakeholders can rely on information directly derived from trustworthy, authoritative sources, mitigating misinformation during critical events.



Use Case: Accessible Education in Low Connectivity Environments

- **Free to Use:** Provides free access to educational resources, making learning accessible to all.
- **Mobile Web Version:** Accessible through mobile devices, providing flexibility for students in low-resource settings.
- **Text-Based Communication:** Primarily text-based, reducing the need for high bandwidth.
- **Inclusive Education:** Enables students in underprivileged regions to access quality educational content without expensive infrastructure.



Ongoing Project: Focus on Strengthening Personalization

- **Gap Analysis:**

Identifies missing content by analyzing connections in the knowledge graph.

Suggests additional materials to fill gaps based on student questions.

- **Knowledge Level Analysis:**

Assesses student knowledge by comparing their questions to the expected content. Highlights areas needing more focus.

- **Personalized Question Recommendations:**

Recommends study questions tailored to the student's current level, reinforcing foundational and advanced topics.

- **Adaptive Learning Pathways:**

Adjusts learning paths in real-time based on student progress, ensuring optimal difficulty for better retention.

- **Curriculum Development & Improvement:**

Uses student performance data to refine curriculum, re-emphasize struggling topics, and improve future lessons.

- **Automated Answer Adjustments:**

Adapts responses based on the student's learning stage.

Contributions

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**Enhance your teaching
Elevate your learning
Sign up today!**

<https://cipherbot.qcri.org>



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