



Bubble Mind



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The Problem

Learning new concepts as a beginner is tough.

Traditional approaches do not apply to everyone:

- ⏳ Too time-consuming
- 🧠 Cognitive-Intensive
- 📦 One-size-fits-all

And while Flashcard apps exist, **most fall short**. Limiting creativity and preventing learners from truly expressing what they know.

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Introducing Bubble Mind

An **AI-Powered self-learning Application** that transforms information into knowledge maps

By combining **evaluation based on freeform retrieval, spaced repetition, Socratic-style learning** and targeted **visual cues**, it helps learners build stronger mental models with less effort

The result: deeper understanding, faster mastery, and learning that truly lasts

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Comparison with other similar Applications

Others

Only closed-type questions	Open-Ended Questions AI
Limited data visualization	Interactive Bubble Cluster Visualization
Static datasets	Dynamically Growing Dataset AI
Limited AI Feedback	Detailed Feedback AI
	Dataset Generator AI
	Accurate Performance Tracking
	Socratic Learning Chat Assistant AI

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The science behind **Bubble Mind**

- Cognitive Load Theory (Sweller, 1988):
 - Learning fails when working memory is overloaded
 - Our Solution:
Reduce irrelevant load with visual clustering → maximize learning-relevant processing
- Working Memory Limits (Miller's 7 ± 2 Rule):
 - Brain holds ~7 chunks at once
 - Our Solution:
Bubble clustering compresses complex knowledge into single cognitive units

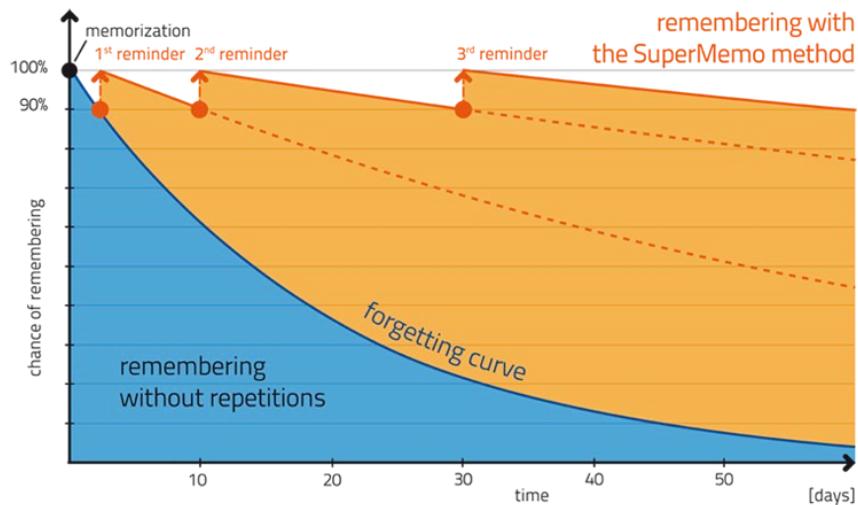
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The science behind **Bubble Mind**

- Spaced Repetition (Ebbinghaus Curve):
 - 70% of knowledge forgotten in 24h
 - Our Solution:
spaced repetition → optimized & personalized review timing



source: <https://www.supermemo.wiki/en/supermemo#spaced-repetition>

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The science behind **Bubble Mind**

- Retrieval Practice (Roediger & Karpicke, 2006):
 - Open-ended recall strengthens memory more than recognition (MCQs)
 - Our Solution:
Freeform question answering trains deeper retrieval pathways and boosts retention
- Socratic Learning:
 - Deep reasoning emerges through guided questioning
 - Our Solution:
AI prompts learners with Socratic-style open questions that stimulate critical thinking

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Features Overview

- Interactive Bubble Cluster Visualization
- AI Dataset Generator
- Dynamically Growing Knowledge Base
- Open-Ended Questioning Engine
- Detailed AI Feedback (Correctness & Completeness)
- Accurate Performance Tracking
- Adaptive Spaced Repetition
- Smart Content Assessment

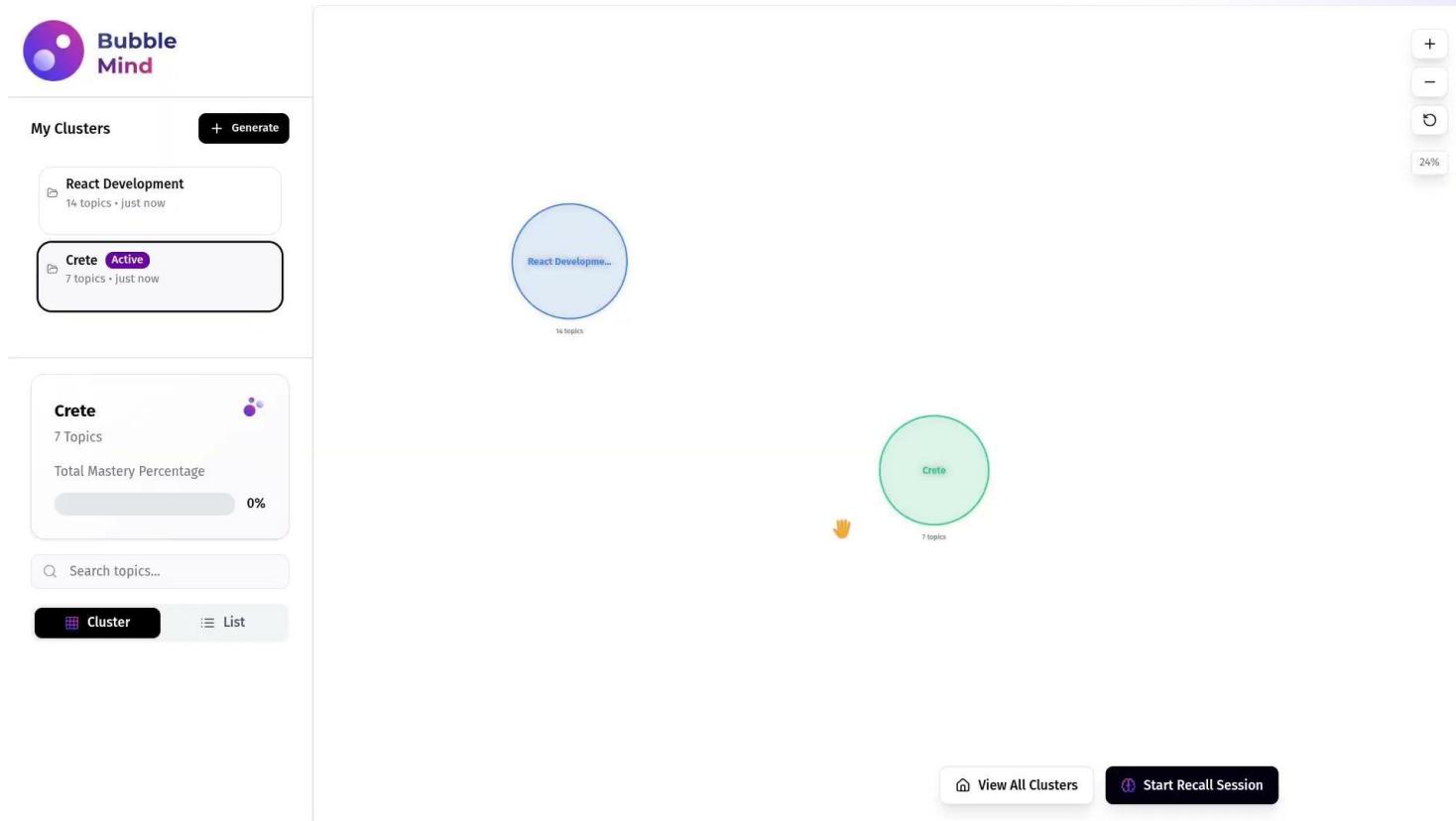
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Features Overview

- Interactive Bubble Cluster Visualization



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Features Overview

- AI Dataset Generator & Dynamically Growing Knowledge Base

The screenshot displays the interface of the Bubble Mind AI Dataset Generator. On the left, a sidebar titled "My Clusters" shows two entries: "React Development" (14 topics, just now) and "Crete" (Active, 7 topics, just now). Below this is a search bar and buttons for "Cluster" and "List". The main area features two large, semi-transparent circular bubbles. The top bubble, colored blue, represents the "React Development" cluster with 14 topics. The bottom bubble, colored green, represents the "Crete" cluster with 7 topics. To the right of the bubbles are several control buttons: a hand icon, a plus sign, a minus sign, a circular arrow, and a progress bar showing 29%. At the bottom are buttons for "View All Clusters" and "Start Recall Session".

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Features Overview

- Open-Ended Questioning Engine

Question Generator

Knossos & Palaces multiple choice

Which architectural feature of Minoan palaces demonstrates their advanced building techniques and concern for natural lighting?

Select your answer:

A. Massive fortification walls

B. Light wells

C. Underground crypts

D. Domed ceilings

Explain your reasoning:

light wells brought natural light into the interior of the palace

Submit Answer

Recall Session
← Exit Session 1 of 20 questions completed Progress 5%

Active Questions (20) Resolved (1)

Knossos & Palaces ✓ Correct Generated Question

Which architectural feature of Minoan palaces demonstrates their advanced building techniques and concern for natural lighting?

✓ Your Response:

Selected: Light wells Explanation: light wells brought natural light into the interior of the palace

□ AI Evaluation: Surprise Me!

The student's response is correct. They accurately selected 'Light wells' as the architectural feature that demonstrates Minoan palaces' advanced building techniques and concern for natural lighting. Their explanation, while brief, shows a basic understanding of the function of light wells. The student correctly identifies that light wells were used to bring natural light into the interior of the palace, which aligns with the key points mentioned in the correct answer. However, their explanation could be more comprehensive. To demonstrate a deeper understanding, the student could have mentioned that light wells showcase advanced construction techniques, as they require sophisticated architectural planning to incorporate into multi-story buildings. Additionally, they could have elaborated on how this feature specifically demonstrates the Minoans' concern for interior illumination in their palatial structures. Despite the brevity of the explanation, the student has grasped the fundamental purpose of light wells in Minoan architecture, which is a good starting point for understanding this aspect of ancient building techniques.

💡 You know, the Minoans were way ahead of their time with those light wells. In fact, their design was so effective that it inspired modern architects thousands of years later. Frank Lloyd Wright, the famous American architect, used similar concepts in his prairie-style homes to create bright, airy spaces. It's pretty wild to think that an ancient civilization from Crete influenced the look of 20th-century suburban houses!

✓ Correct Answer:

Light wells - Light wells are specifically mentioned in the knowledge base as a feature demonstrating the technical sophistication of Minoan palatial architecture. This architectural element allowed natural light to penetrate multi-story buildings, showing both advanced construction techniques and a concern for interior illumination. The other options, while plausible for ancient architecture, are not mentioned in the given information about Minoan palaces and do not specifically relate to lighting or the described architectural innovations.

Features Overview

- **Detailed AI Feedback (Correctness & Completeness)**

History | easy | 2/4

Tell me everything you know about History.

Performance Breakdown:

56%	Correctness
35%	Completeness

AI Expansion & Feedback:

Your original response:

there was the Minoan civilization in ancient times. Minoans had palaces in Phaistos and Knossos. At one point Crete was a colony of Ottomans and Venetians. Crete was independent and united with Greece around 1910. Famously known for the traditional pizza

Surprise Me!

Your answer about History:

Correct aspects:

- "there was the Minoan civilization in ancient times." - Supported by the source, which mentions the Minoan civilization flourishing during the Bronze Age.
- "Minoans had palaces in Phaistos and Knossos." - Directly supported by the source, which lists Knossos and Phaistos as Minoan palatial centers.

Areas for clarification:

- "At one point Crete was a colony of Ottomans and Venetians." - Partially correct but imprecise. The source indicates Venetian rule (1205-1669) and Ottoman control (from 1669), but doesn't use the term 'colony' for both.
- "Crete was independent and united with Greece around 1910." - Partially correct but imprecise. The source mentions Crete uniting with Greece in 1913, but doesn't specify independence immediately before.

Corrections needed:

- "Famously known for the traditional pizza" - This claim is not supported by the given source and contradicts the cultural information provided about Crete.

Next Steps:

- Review the explanations above to strengthen your understanding
- Focus on the areas marked for clarification or correction
- Consider adding more details to improve completeness (current: 35%)

💡 You know, the ancient Minoans of Crete were way ahead of their time. They actually had flush toilets and an advanced plumbing system in the palace of Knossos over 4,000 years ago! It's pretty wild to think they had that kind of technology when most of Europe was still in the Stone Age. Makes you wonder what other innovations they might have had that we don't know about.

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Features Overview

- **Personalized Knowledge Expansion**



Welcome to Study Mode for **Rhythm and Meter!** 🎵

I'm here to help you learn about this topic. What would you like to explore first? You can ask me about:

- Key concepts and definitions
- Practical applications
- Examples and explanations
- Connections to other topics
- Or anything else you're curious about!

Let's dive into learning together!

10:50 AM



can you explain more about time signatures

10:50 AM

Certainly! I'd be happy to explore time signatures with you. But first, let's start by considering what you already know.

What do you understand about time signatures so far? Can you describe what they look like or where you might see them in a piece of music?

10:50 AM



i know there are many signatures, like 4/4 and 8/8, but can we have something like 3/7?

10:51 AM

That's an interesting question! Let's explore this idea further.

First, can you explain what you understand about time signatures like 4/4 and 8/8? What do the numbers in these signatures represent?



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Questions?



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