Catalyst: Swayam edition

Over the past few months, you might have seen a lot of buzz around the floor — engineering folks hopping between cabins, intense whiteboard sessions, last-minute huddles. That's because we are now just a few days away from the Go-Live of the SWAYAM project.

For the last month or so, SWAYAM has been keeping us busy — aligning on features, locking down approaches, building, testing, and iterating. In this edition of *Catalyst*, we wanted to share a bit of that journey — especially because this is the first time our AI features will be rolled out at such a massive scale.

A quick background

SWAYAM (Study Webs of Active–Learning for Young Aspiring Minds) is a Government of India initiative to offer free, high-quality online courses from top institutions like IITs, IISc, and others — aiming to bring accessible education to learners across the country.

We were awarded the SWAYAM tender in May to integrate AI features into their video learning platform — features that enhance learning through smarter summaries, translations, quizzes, and conversational assistance.

Winning the tender was no small feat — it involved multiple rounds of evaluation, detailed documentation, and close teamwork. Since the project kickoff, our teams have been working at full speed to build and deliver these features. The SWAYAM team has been carefully testing every piece, as we're not the only vendor in the running — others are also being evaluated.

It's been an exciting, fast-paced journey so far — and we're just getting started.

What did we build?

The pilot covers 50 courses, with around 70 videos each — totaling 3,500 videos. Each of the courses and lessons are enabled with the following AI features:
AI Summaries (Video+Textual Summaries), Transcriptions (with multiple supported languages), Lesson Chapters and Chapter Summaries, Topic wise reels for a course, AI Course Assistant (Chatbot for Q & A and Quiz generation). [Do watch the promo video here.](#)

The expected traffic on the platform is equally significant, with up to 2 lakh registered users, nearly half of them expected to be active during peak hours.

Below are just a few examples of the numbers we're working with:

- AI Video summaries (video + text): 10,500
- Multilingual translations (10 languages): 35,000
- AI-generated chapters: 28,000
- Chapter summaries across languages: 280,000
- # Videos chatbot is trained on: 3,500

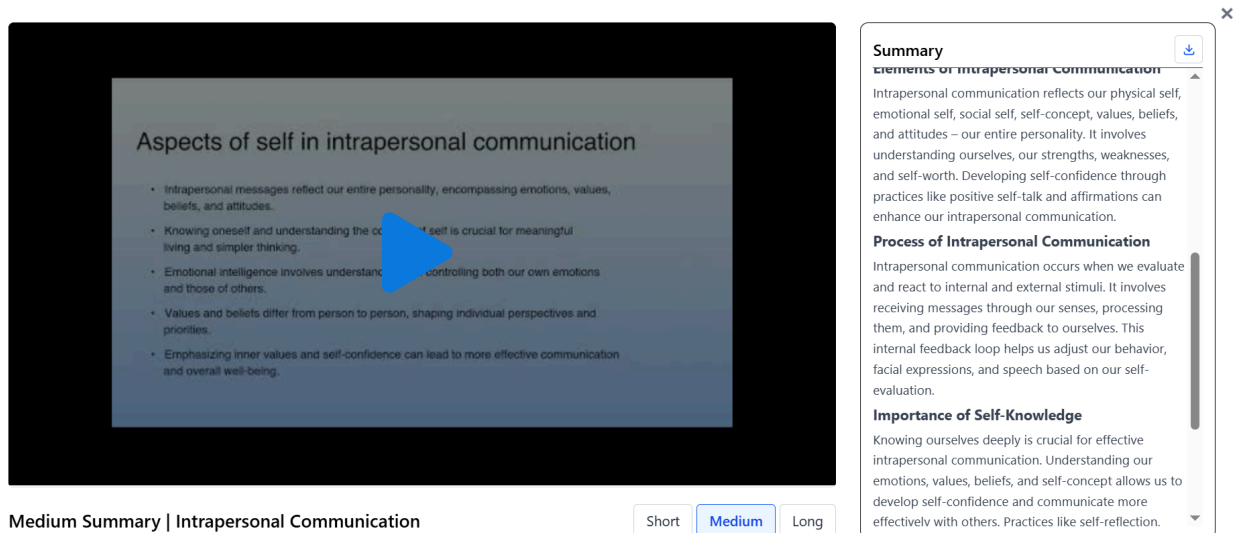# What's inside: A closer look at the AI Features

Here's a quick walkthrough of the key AI-powered features we've built into the SWAYAM platform — features designed to support both learners and educators at scale, and make high-quality educational content more accessible, engaging, and easier to consume.

Video Summaries — Video & Text Form

To help students quickly grasp what a lesson is about, we generate summaries in two formats, video and text. These summaries capture key concepts, definitions, and learning objectives, so learners can revise efficiently:

- Short video summaries with bullet-point overlays and engaging voice-over, available in short, medium and long versions.

- Downloadable lesson wise textual summaries available in 10 Indian languages promoting inclusivity and wider reach.

Summary

Elements of Intrapersonal Communication

Intrapersonal communication reflects our physical self, emotional self, social self, self-concept, values, beliefs, and attitudes – our entire personality. It involves understanding ourselves, our strengths, weaknesses, and self-worth. Developing self-confidence through practices like positive self-talk and affirmations can enhance our intrapersonal communication.

Process of Intrapersonal Communication

Intrapersonal communication occurs when we evaluate and react to internal and external stimuli. It involves receiving messages through our senses, processing them, and providing feedback to ourselves. This internal feedback loop helps us adjust our behavior, facial expressions, and speech based on our self-evaluation.

Importance of Self-Knowledge

Knowing ourselves deeply is crucial for effective intrapersonal communication. Understanding our emotions, values, beliefs, and self-concept allows us to develop self-confidence and communicate more effectively with others. Practices like self-reflection.
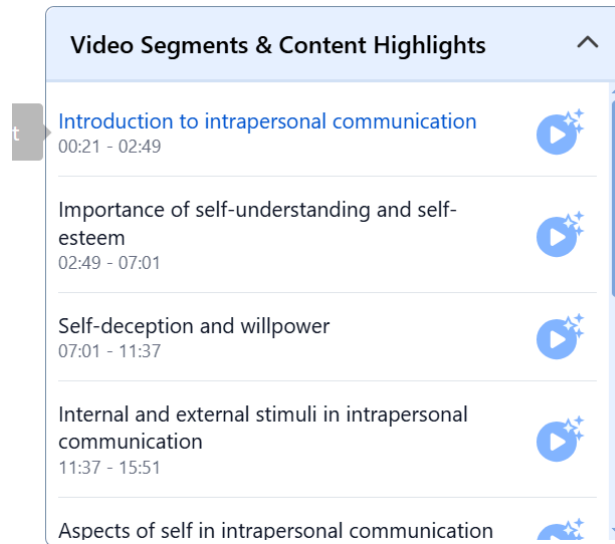
Aspects of self in intrapersonal communication

- Intrapersonal messages reflect our entire personality, encompassing emotions, values, beliefs, and attitudes.
- Knowing oneself and understanding the concept self is crucial for meaningful living and simpler thinking.
- Emotional intelligence involves understanding and controlling both our own emotions and those of others.
- Values and beliefs differ from person to person, shaping individual perspectives and priorities.
- Emphasizing inner values and self-confidence can lead to more effective communication and overall well-being.

Medium Summary | Intrapersonal Communication

Short | Medium | Long

Chapter Summaries

Long-form video lectures are automatically broken down into logical chapters with:

- Smart titles, durations, and timestamp navigation, making it easy to jump to relevant parts.

- Each chapter has a short summary — again in video and text formats — to help learners understand the context quickly.

- All textual summaries are available in 10 regional languages.

Video Segments & Content Highlights ^

Introduction to intrapersonal communication
00:21 - 02:49

Importance of self-understanding and self-
esteem
02:49 - 07:01

Self-deception and willpower
07:01 - 11:37

Internal and external stimuli in intrapersonal
communication
11:37 - 15:51

Aspects of self in intrapersonal communication

Multilingual Translations

SWAYAM caters to a diverse user base across India, and multilingual support is key:

- We generate subtitles and transcripts in 10 Indian languages for each lesson.
- Text summaries and chapter summaries are also translated.
- All translated content is available for download (e.g., SRT for subtitles, PDF for text summaries) for offline use or study.

AI Course Assistant for Q&A and Quiz Generation

This is a game-changer for learning support:

- A real-time chatbot sits on both the lesson and course pages, allowing learners to ask doubts in natural language.
- The chatbot fetches answers by intelligently understanding the transcript and context of the video.
- Users can even specify whether they want answers from a single lesson or the entire course.
- It remembers the conversation and supports follow-up questions.
- It also generates timestamp-linked answers so learners can directly jump to relevant parts of the video.
- It can also create interactive quizzes with questions of varying types (MCQs, numerical, short answers, etc.).

- Teachers or learners can choose the difficulty level and number of questions.
- Questions are aligned to Bloom's taxonomy, ensuring they meet academic rigor.
- All quizzes are downloadable as PDFs with or without solutions for offline practice or review
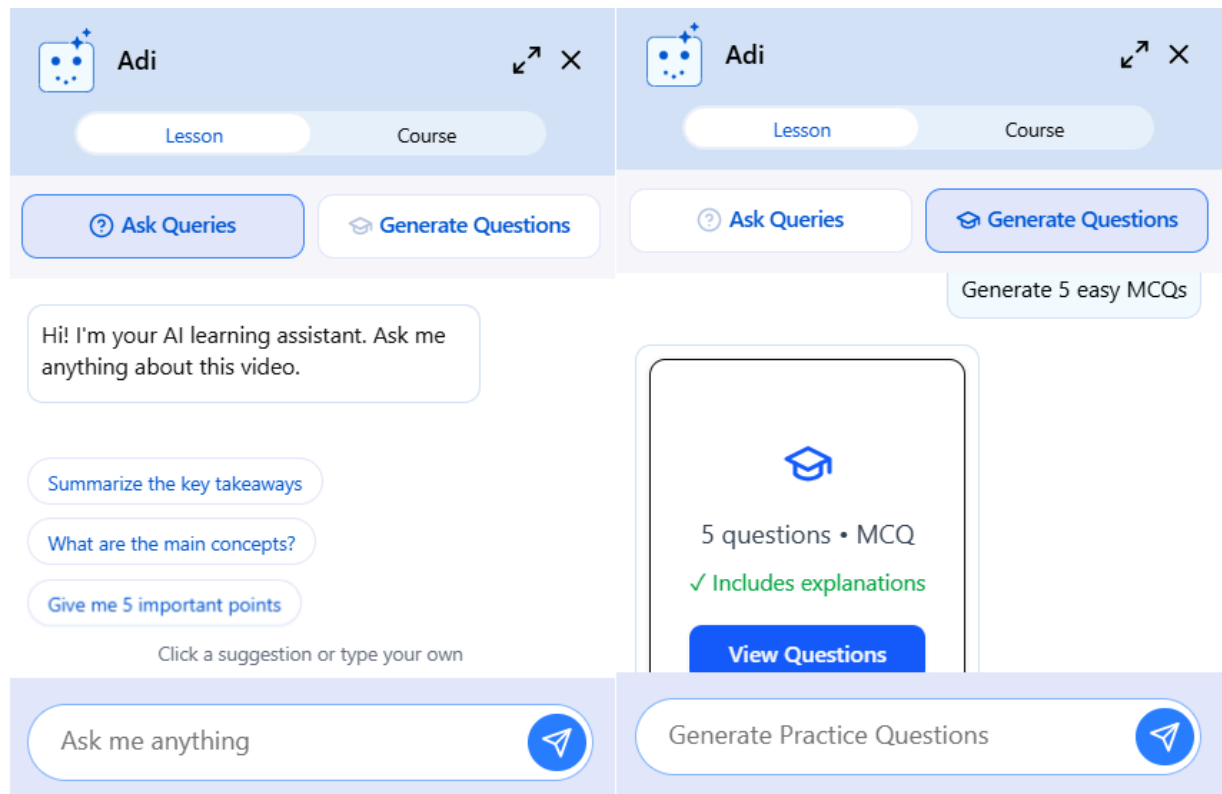
AI-Powered Reels Based on Topics

To make revision and concept reinforcement more visual:

- Our system detects key topics across a course and auto-generates short vertical reels for each major topic.
- Each reel is clickable — taking you straight to the video section that covers that topic.
- If a topic appears multiple times in a course, we intelligently group it into a single reel with multiple reference points.
- Typically, learners can expect 4-5 reels per week per course.

One of the important milestones in this release is that all the AI models powering these features are hosted in India. This was a critical requirement from the SWAYAM team, primarily for data privacy, and compliance reasons — especially since SWAYAM is a government-backed platform serving millions of learners across the country.

What we have learnt

Over the past couple of years, we have tried many AI ideas in our lab.But the SWAYAM project was different. It gave us a real opportunity to build something with AI that's actually being used by lakhs of users.

This wasn't just about using AI to speed things up — it was about understanding what it really takes to build and run an AI product at scale. Now, after going through this journey, we have a much clearer idea of how to do that well.

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Using AI well is not just about writing good prompts. You need strong foundations — and our engineering team has done a brilliant job of making that happen.

A few key takeaways:

- Handling scale: We had to make sure everything runs smoothly even with lakhs of users logging in. That meant load-testing, optimizing, and planning for peak loads.
- Building responsibly: Since the platform is used by students, accuracy was a top priority. We couldn't afford to let the AI give wrong or confusing answers — so we had to put solid checks in place.

- End-to-end readiness: Whether it was chat, quizzes, or PDF exports — everything had to work well together, with no loose ends.

This journey has given us a deeper understanding of what it takes to build reliable, responsible AI products — and we hope to carry these learnings into everything we take on next.

Why this matters

While our main focus is BFSI, SWAYAM is a bit special. It's a national-level platform, built for scale, powered by AI, and most importantly centered around video — a space we know well. It was a great opportunity to put our work to the test — to learn, grow, and see how our solutions hold up alongside other experienced players in the field.

The journey isn't over. In the coming weeks, our features will start going live, and the evaluation will continue. We're genuinely excited — not just because it's a big project, but because it gives us confidence that we are able to build and run AI systems that scale for lakhs of users, from functionality to operational experience.

Here's to a proud milestone — and many more ahead.