Active Learning for Large Classes

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BACKGROUND

In a conventional lecture setting, students listen to their professors with little interaction or feedback.

Such lecture-based approach may not be effective for all students given that students learn differently and at a different pace.

Active learning uses activities and/or discussions that involve higher-order thinking and often involves group work in engaging students compared to listening to an expert.

OBJECTIVE

Having a mobile application that brings active learning out of a classroom providing flexibility and interaction between professors and students.

The mobile application aims to achieve two goals namely to provide student’s personalisation and teacher’s presence.

STUDENT’S PERSONALISATION

Students being able to add their own milestones and study resources on top of a baseline course structure tailoring it to their own methods of studying.

TEACHER’S PRESENCE

Students being able to feel the impact of the professor even though the professor is not physically present.

DEVELOPMENT TOOLS

Smiley: Wireframes
Balsamiq provides black and white UI elements to enable rapid creation of desired functionalities.

Smiley: Frontend Development
Flutter provides development on a single codebase for both iOS & Android devices which saves development time.

Flame: Prototypes
Sketch provides functionality that enables quick interactions on designs to have a look and feel of the final product.

Flame: Backend Development
Firebase is a mobile Backend as a Service (mBaaS) that provides authentication, database, analytics that allows for quick prototyping.

SURVEY

A survey was carried out with 26 participants with some of the questions and results shown below.

If personalisation is important: (89% Yes, 11% No)

If NTULearn provided personalised learning: (16% Yes, 16% Somewhat provides, 68% No)

If they would use the mobile application: (60% Yes, 20% Maybe, 20% No)

DASHBOARD

Dashboard is a one-page view that helps students identify what’s important, upcoming to keep track of their study progress.

SCHEDULE

Schedule provides a single point of reference for class schedules and user’s personal schedule.

MESSAGING

Messaging allows students and professors to communicate with one another, ask questions, discuss group projects.

NOTETAKING

Resources allow students to take notes that can be tagged and used for revision.

COMMUNITY

Community allows professors and students to share resources such as videos.