Vision Statement
(Draft)

Project Title: Algorand Blockchain NGDLE

Team name: GoCSIL

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What problem is being solved:

The Learning Management System is remarkably adopted in modern higher education. According to the first ECAR survey of faculty and IT, over 80% of the faculty utilize LMS to support their instruction, and also over 80% students use LMS for learning, most of both of whom also find LMS to be useful. Despite the high percentages of LMS adoption, relatively few instructors use its more advanced features to promote interaction outside the classroom. However, institutions have been seeking replacement for LMS in the next three years. The problem is that nowadays LMS has been overly focused on administration features for the course, instead of assisting learning itself. Too much features are designed to the demand and convenience of instructors, but very limited things are controlled by students, the real subject of "learning".

Why the problem is important:

The current LMSs are designed to be course- and instructor- centric based on past views on higher education. However, higher education is in a transition from focusing on instructor to learning and learner, which poses a dilemma for current LMSs. To illustrate, GauchoSpace, our most familiar LMS for sure, did a great job in distributing lecture materials, publishing grades, handling homework submissions, and supporting forums, but that's all it can possibly do, and all of those functions are predetermined by the teaching team. If you want to practice other common learning procedures, say planning courses, taking notes, organizing supportive materials, working in groups with others, etc., GauchoSpace will not be able to support any of those, at least before being enabled by the instructor. This issue arises in almost every LMS currently deployed in college, and people have realized that it is inconvenient and

unreasonable to have everything solely held in the instructors' hands. Thus, a new LMS is needed, where students can personalize its functions based on their necessities and fully utilize the system to comprehensively assist their learning, without being forced into a standard form of how to use the LMS in a very restricted way.

How the problem is solved today

We introduce the idea of Next Generation Digital Learning Environment (NGDLE). It will not itself be a single application like current LMSs, rather it will be an ecosystem of learning. We replace NGDLE with a focus on learning itself and the learner.

It will address five domains of core functionality:

- Interoperability and Integration
- Personalization
- Analytics, Advising, and Learning Assessment
- Collaboration
- Accessibility and Universal Design

In a word, NGDLE must give students more flexibility in studying, it requires personalized features instead of traditional uniformity. It may maximize the working efficiency of every person by learning/ tracking their preference and working behavior.

Identify the outcome of the project

A personalized education platform that helps students to focus on realizing specific aspects of NGDLE functionality and addresses the key needs for personalization by enabling it at a variety of levels, from the individual to the institutional.

Technologies (need to confirm with mentor)

Algorand blockchain
Issue tracking: Github
Frontend: html, CSS, JavaScript, React
Backend: Node.js, SQL
Cloud server: Heroku

Milestones (need to confirm with mentor)

- Understand the NGDLE thought
- Get familiar with the Algorand blockchain
- Implement the LMS component prototype
- Adding more modules on the platform