

Project Plan: Python-Powered E-Learning Platform for Lesotho

The e-learning platform will provide Lesotho's primary and secondary school students, especially those in rural areas, with access to quality education aligned with the national curriculum. It will allow offline access, incorporate interactive lessons, and provide tools for both students and teachers to enhance the learning experience.

Project Goals

1. Improve Educational Access: Provide free, curriculum-based learning resources to students in rural Lesotho who may have limited access to teachers and schools.
2. Remote Learning: Enable students to study remotely, even in areas with unreliable internet access, by offering offline functionalities.
3. Support for Teachers: Allow teachers to monitor student progress and offer feedback remotely.
4. Curriculum Alignment: Ensure that all materials are aligned with Lesotho's national educational standards for Grade 8 to Grade 12.
5. Scalability: Start with a pilot program and gradually scale to cover the entire country.

Project Plan Structure

1. Research and Curriculum Alignment (1 Month)

Objective: Collaborate with local education authorities to ensure the platform aligns with the national curriculum and caters to the specific educational needs of Lesotho's students.

Actions:

- Partner with the Ministry of Education in Lesotho for syllabus guidance.
- Identify key subjects and learning modules for Grades 8-12.
- Consult local teachers to gather requirements for teaching materials.

Tools: Notion or Trello for task management and collaboration; Google Docs or Microsoft Word for documenting curriculum outlines.

2. Content Development (2-3 Months)

Objective: Develop high-quality educational content that includes lessons, quizzes, videos, and learning materials.

Actions:

- Work with local educators and subject matter experts to create digital lessons.
- Produce interactive quizzes, exercises, and lesson plans in line with the curriculum.
- Record educational videos to provide multimedia resources.
- Ensure all materials are available in Sesotho and English.

Tools: Articulate 360 or H5P for interactive content creation; OBS Studio or Camtasia for video recording and editing; Google Forms or Quizlet for creating quizzes.

3. Platform Development (3-4 Months)

Objective: Develop a scalable e-learning platform with core functionalities like user registration, content delivery, and progress tracking.

Technology Stack:

- Back-end: Python, Django, PostgreSQL

- Front-end: React.js, Next.js, HTML/CSS, TailwindCSS
- Mobile Access: React Native
- APIs: Django REST Framework
- Offline Functionality: SQLite, Service Workers

4. Testing and Iteration (1-2 Months)

Objective: Test the platform's usability, performance, and effectiveness with a small group of students and teachers.

Tools: Selenium, Pytest, Postman, Google Analytics, Jira.

5. Launch and Rollout (1 Month)

Objective: Launch the e-learning platform for the initial target schools in Lesotho.

Tools: AWS or Heroku for cloud deployment and hosting, Zendesk for ongoing support.