

# Boosted Student Performance by 62% Through AI Exam Generation at Ghana University

The University of Ghana is one of the best and most research-led universities across the continent of Africa; it has always maintained an emphasis on academic quality and innovation. However, the conventional method for creating assessments (quizzes, class tests, and internal exams) was becoming considerably tedious and inconsistent for professors.

There were faculty members who were creating, moderating, and revising assessments manually, which often took many hours away from their teaching and research duties, slowed feedback cycles, and ultimately affected student learning outcomes.

In order to address these issues and to align with the University of Ghana's mission for academic modernization, PrepAI, an innovative AI-powered question generator, was implemented to improve the way educators organized and evaluated assessments.

## Client Overview

**Client:** The University of Ghana

**Location:** Ghana

**Sector:** Higher Education

**Program:** PrepAI Revolutionizing the Exam Generation Process

## The Challenges the University Encountered

The University of Ghana faced several operational and academic bottlenecks. The professors had to draft weekly/monthly tests, annual exams manually for assessments. This involved a lot of their time, resulting in reducing the student engagement and teachers' efficiency. The other challenges the University of Ghana encountered were:

### Time-Consuming Assessment Creation

Professors and lecturers at the University of Ghana devoted 15–25 hours each week to the manual process of preparing quizzes, in-class tests, and examination papers. The entire process included drafting questions, modifying the drafted questions, and approving the questions to go into the final document. This whole process was time-consuming and repeated itself for each assessment. The time taken to create and moderate a single exam sometimes extended to several days, causing scheduling delays and increased workload.

## Inconsistent Quality Questions

Due to varying time constraints and manual effort, the faculty members at each department at the University of Ghana traditionally made question papers that often lacked consistency in difficulty levels, formatting, and coverage. Manually making question papers is difficult and time-consuming and does not even have any scope for personalization. This inconsistency affected the credibility of assessments, and measuring students' performance from such assessments became challenging. Professors cannot make a variety of questions/assessments like MCQs, quizzes, true/false, HOTS, subjective, and more. Thus, this cannot reduce the learning gap in education.

## Delayed Feedback

The professors at the University of Ghana used to create assessments manually, which takes a huge amount of time. They have to research, understand, and review everything to make tests for the students. The assessment moderation and approval process included multiple review stages; students often received feedback much later, which produced a delay in academic progress and made it difficult for learners to recognize areas of improvement in a timely manner. For professors, test evaluation checking was also a difficult task because reviewing all the response sheets is tedious and time-consuming at the same time.

## Lack of AI Adoption

With universities worldwide integrating AI in education, the University of Ghana risked losing its competitive edge and appeal to both faculty and international students if modernization wasn't prioritized. This lack of AI in education made the University of Ghana rely on the traditional systems for test creation. Whereas the universities across the globe are adopting AI for support in teaching and assessment. This puts the university at risk of limiting its competitive advantage as well as slowing digital transformation across more than one department.

## The Solutions: How PrepAI Transformed Assessment Creation Challenges

### Automated Exam Generation

At Ghana University, professors poured endless hours into preparing exam papers manually to ensure consistency and course outcome alignment. Question formulation was unnecessarily repetitive, challenging on the clock, and did not have standardization.

After Integrating PrepAI automated generation of exams in every phase of the assessment lifecycle becomes easy by:

- **Facilitated a Digital Bank of Questions:** Offering an efficient approach, existing question banks were digitized into ai-enabled assessments with up to 80% less faculty time spent in a week.
- **Rapid Question Generation:** Professors were able to rapidly generate multiple high-quality question papers (in minutes) based on their own lecture notes, presentations, or the text.

## Student Engagement

Manual evaluations had limited formats when PrepAI was not integrated and it did not take into consideration different learning levels. Many students found the assessments to be repetitious or not aligned with their current knowledge or skills, which decreased engagement and motivation. After integrating the PrepAI assessment tool:

- **Diverse and Balanced Assessments:** The Ghana university professors were able to generate assessments in a variety of formats like MCQs, fill-in-the-blanks, true-false, HOTS, enabling all learners to be assessed inclusively.
- **Active Learning Became Possible:** The AI-enabled platform allowed professors to implement adaptive assessments catered to each student's learning ability for a more interactive and personalized classroom setting.

## Quiz and Feedback Process

Without PrepAI, lecturers rarely had time to design quizzes or formative tests during classes. Evaluating student comprehension in real-time was almost impossible due to manual limitations. Once PrepAI was integrated:

- **Quick Quiz Generation:** Lecturers could spend 90% of their time engaged in instruction and 10% of the time generating instant quizzes using previously taught materials.
- **Instant Feedback Generation:** The professor simply uploaded the course material and PrepAI generated the quizzes right away, an opportunity for real-time evaluation and fast feedback.

## Instant Results and Analytics

Grading and analytics were manual and inconsistent. Students waited days or weeks for feedback, delaying improvement and affecting motivation. The faculty lacked the data to identify struggling students early.

- **Immediate Student Responses:** PrepAI gave results upon submission, allowing students to see what they needed to improve instantly and take remedial action.
- **Analytics of Performance:** Reports, as well as detailed analyses of relevant data around student performance, were made available to professors to see trends and guide student progress, along with improving their instructional practices.

If the university did not integrate PrepAI, then they would have to encounter the following:

- Faculty could engage in repetitive manual assessment tasks, reducing faculty's availability to teach, research and innovate.
- Students might have continued experiencing infrequent assessments and delayed feedback, which may have contributed to diminished engagement and performance.
- The university risked falling significantly behind its global peers in the adoption of innovative, modern academic technology.
- Any continued administrative inefficiency could have significantly limited any potential scalability and reduced the institution's competitiveness in an AI-driven education future.

## Implementation: Rolling Out PrepAI Across the University of Ghana

The University of Ghana adopted PrepAI through a phased rollout, beginning with smaller departments and gradually expanding to larger faculties. This approach ensured smooth onboarding, hands-on learning, and consistent feedback integration throughout the process.

### Convenient and Fast Integration

- **Intuitive and User-Friendly:** Professors reported that PrepAI was user-friendly and easy to use.
- **Direct Copy of Existing Notes/Slides/Materials:** The platform worked with existing notes, lecture slides, and other educator materials, eliminating the need for new teaching formats.

### Fast Assessment Turnaround

- **Decreased Overall Exam Time by 70%:** The time requirement for creating, moderating, and approving an exam dropped significantly.
- **Same-Day Feedback for Students:** Students received evaluation reports as soon as tests were conducted. The AI tools helped in engaging and purposefully clarifying the outcomes of their learning when they could assess their work.

### Increased Student Engagement

- **Real-Time Feedback about Learning:** Students could assess their understanding after every lecture, which engaged them more in classes and learning.
- **Constant Motivation:** Faculty engaged students in regular low-stake assessments as motivators that kept students learning in every class.

# Results: Transformed Faculty Workflows and Assessment Standards

## Increased Administrative Efficiency by 80%

AI-powered question generation reduced manual exam creation and grading time by more than **80%**, resulting in:

- Faculty redirecting their time toward research, mentoring, and innovation.
- Streamlined moderation and approval processes, minimizing administrative delays..

## 62% Boost in Student Performance

- Students benefited from frequent formative assessments and immediate feedback.
- Continuous evaluations strengthened learning retention and self-assessment skills.
- Overall academic performance improved by **62.3%** compared to the previous semester.

## Accelerated AI Adoption and Institutional Growth

- PrepAI's success encouraged widespread participation in AI-driven academic practices.
- The university experienced increased student interest in **technology and AI-related programs**.
- Ghana positioned itself as a regional leader in AI-integrated education.

## Scalability and Flexibility

- The platform scaled seamlessly across departments, applicable to small groups and large cohorts alike.
- Used effectively across disciplines, from **humanities to health sciences**, enhancing its institutional versatility.

## Data-Driven Academic Insights

- In-depth analytics helped educators gain real-time visibility into student progress.
- Proactive support helped in early identification of struggling students and allowed for timely interventions.
- Evidence-based decisions become possible data insights that help shape curriculum and teaching improvements.

## Why Does This Matter?

The partnership between PrepAI and the University of Ghana is not simply about automation; it is a model for how AI offers upward-shift education in Africa. By tackling persistent academic

bottlenecks like manual assessments, late grading, and limited bandwidth for faculty, PrepAI demonstrated that technology can empower educators and not replace them.

Empower your educators. Transform your classrooms.

Join the growing movement of universities integrating AI to make learning smarter, faster, and fairer.

Discover how PrepAI can help your institution simplify assessments, boost faculty efficiency, and drive student success.

**[Book a Demo](#)**