



UniMAC
UNIVERSITY OF MEDIA, ARTS AND COMMUNICATION

PROPOSAL FOR THE DEVELOPMENT AND IMPLEMENTATION OF A PAST QUESTIONS PORTAL

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Executive Summary

This proposal outlines the development and implementation of a Past Questions Portal for the University of Media, Arts and Communication (UniMAC). The Portal will serve as a centralised, secure, and user-friendly digital platform that provides students and faculty with access to previous examination papers across all academic departments. This initiative is a collaborative effort between the IT Directorate and the Library Directorate to improve academic support services and promote a culture of academic excellence.

Background and Rationale

Currently, there is no central system in place at UniMAC for accessing past examination questions. Students often rely on informal channels such as WhatsApp groups or printed handouts, which are incomplete, disorganised, and of inconsistent quality. This limits equal access and may hinder effective exam preparation.

To address this, we propose the development of a Past Questions Portal that will:

- Provide equitable access to previous examination materials.
- Help students prepare more effectively for exams.
- Support faculty and academic advisors in curriculum review and alignment.
- Enhance the University's digital infrastructure and commitment to academic support.

Objectives

- Digitise and archive all available past examination questions.
- Develop a secure and searchable web-based portal accessible via the University's digital platforms.
- Ensure cross-departmental collaboration between the IT and Library Directorates for sustainability and maintenance.
- Improve transparency, accessibility, and academic preparedness among students.

Scope of the Project

The project will include:

1. **Collection and Digitisation**

- Collaborate with departments to gather available past questions (5–10 years).
- Scan and digitise hard copy documents.
- Standardise formats for uniformity.

2. **Portal Development**

- Design and build a responsive, user-friendly web portal.
- Implement secure user access (SSO for students, faculty).
- Create a search and filter function by year, course code, department, and level.

3. **Integration and Access**

- Integrate with the University's existing digital platforms (e.g., LMS, student portal).
- Ensure compatibility with mobile and desktop devices.

4. **Maintenance and Updates**

- Establish a workflow for uploading new exam papers each semester.
- Assign roles to the library and IT staff for content validation and technical support.

Implementation Plan

Phase	Activities	Timeline
Phase 1 – Planning	Project team formation, needs assessment, and resource planning	Month 1
Phase 2 – Content Gathering (Sampling)	Collection and digitisation of past papers	Month 1–2
Phase 3 – Development	Portal design, database creation, and user interface setup	Months 2–3
Phase 4 – Testing	Beta testing with students and faculty	Month 4
Phase 5 – Launch & Training	Official launch, staff training, publicity	Month 4
Phase 6 – Monitoring	Ongoing content updates and technical support	Continuous

Roles and Responsibilities

IT Directorate

- Design and develop the portal.
- Implement data security and user authentication.
- Provide technical maintenance and upgrades.

Library Directorate

- Lead the collection and curation of past papers.
- Standardise formatting and ensure metadata accuracy.
- Coordinate faculty support for content provision.

Academic Directorate

- Submit available past exam questions.
- Validate content accuracy and relevance.

Budget Overview

Item	Estimated Cost
Hardware (scanners, storage)	Nil (Already available)
Software Development	Nil (In-house resource)
Portal Hosting & Security	Nil (Available now but subject to renewal)
Portal Hosting Renewal	980.00
Staff Training & Workshops	Nil (Internal resources)
Promotion & Awareness	Nil (Student WhatsApp groups and Classroom)
Total Estimated Budget	Nil (For the first year)
Estimated Recurrent Cost	\$980.00

The estimated budget for this project development is nil, as it will be fully undertaken internally by the ICT Directorate. However, there will be annual costs associated with hosting and maintaining the Virtual Private Server (VPS) required for the application. The total annual cost for hosting and maintenance of the VPS, with specifications including **16GB RAM, 6 CPUs, 320GB storage space, and an 8TB transfer rate**, is estimated at **\$980.00**. However, we currently have a hosting package available to host the application for a few months.

Risk Assessment and Mitigation

Risk	Mitigation
An incomplete collection of past papers	Establish formal agreements with departments for content submission
Low student adoption	Awareness campaigns, integration with LMS
Data security concerns	Use of SSL encryption, role-based access control
Maintenance sustainability	Allocate annual IT budget for upgrades and support

Expected Outcomes and Benefits

- Increased student preparedness and academic performance.
- Improved access to academic resources.
- Streamlined communication between departments, IT, and the library.
- Enhanced institutional reputation for innovation in student support.

Review of Similar Systems in Other Universities

1. Benchmarking with Peer Institutions

In developing this proposal, a brief review was conducted of similar past examination repository systems implemented in other Ghanaian universities. This benchmarking demonstrates that the concept of a Past Questions Portal is neither experimental nor unprecedented. Rather, it is a proven academic support tool adopted by reputable institutions.

a. University of Mines and Technology (UMaT)

The University of Mines and Technology provides access to past examination materials through a system hosted at <https://past.streetsensegh.org/>. The platform is built on **ProjectSend**, an open-source file-sharing application.

ProjectSend is primarily designed as a general file distribution system rather than a purpose-built academic examination repository.

While this approach demonstrates initiative in digitising past questions, several limitations are inherent in the use of a generic open-source file-sharing tool:

- Limited customization to academic workflows.
- Restricted institutional control over core system architecture.
- Dependence on third-party update cycles and security patches.
- Limited integration with university authentication systems.
- Basic metadata structure is not optimised for course-based indexing.
- Scalability and performance limitations under increased usage.
- Potential long-term sustainability concerns if the open-source project becomes inactive.

Thus, while functional, the system is not fully tailored to the academic and administrative structure of a university.

b. University of Ghana

The University of Ghana provides access to past examination papers via the Balme Library portal (<https://balme.ug.edu.gh/past.exampapers/index.php>).

The platform used is SLiMS (Senayan Library Management System), an open-source software primarily designed for managing library catalogues. This implementation demonstrates a more structured academic repository model and reinforces the importance of centralised digital access to examination materials. It also highlights that leading universities recognise the academic value of such systems.

However, publicly available systems often:

- Operate within fixed structural frameworks.
- May not be deeply integrated into broader academic data systems.
- Are sometimes limited to library access models rather than full digital ecosystem integration.

2. Strategic Case for an In-House Developed System at UniMAC

While the concept of a Past Questions Portal is not novel, the **strategic value lies in how it is developed and managed**.

UniMAC's proposed system differs fundamentally because it will be:

- **Fully developed in-house** by the IT Directorate.
- **Curated academically** by the Library Directorate.
- **Institutionally owned and controlled** at every level.

Key Advantages of In-House Development

1. Full Institutional Control

Unlike third-party or open-source deployments, an internally developed system gives UniMAC:

- Complete control over system architecture.
- Freedom to modify, expand, or redesign features at any time.
- Independence from external developers or vendors.
- Control over the hosting environment and data governance.

This ensures long-term sustainability and strategic autonomy.

2. Tailored to UniMAC's Academic Structure

UniMAC has unique academic programs in media, arts, communication, journalism, film, digital media, and creative arts. A generic file-sharing system cannot adequately reflect:

- Course coding structures
- Academic directorate workflows
- Examination moderation processes
- Programme-based classification systems

An in-house system can be designed specifically around:

- Faculty → Department → Programme → Level → Course Code hierarchy.
- Integration with student portals and LMS.
- Role-based access (student, faculty, admin).
- Advanced search filters (semester, lecturer, course type, year).

This level of contextual design increases usability and academic value.

3. Enhanced Data Security and Governance

Developing the system internally ensures:

- Hosting on University-controlled Virtual Private Servers.
- Compliance with institutional data protection policies.
- Role-based authentication and authorisation.
- Reduced risk of unauthorized distribution.

Given the sensitive nature of examination materials, governance and control are critical.

4. Long-Term Cost Efficiency

While some institutions rely on external developers or third-party systems, UniMAC's model:

- Requires **no initial development cost** (internal resources).
- Only incurs recurrent VPS hosting costs.
- Avoids licensing fees.
- Avoids vendor lock-in risks.

This makes the project financially sustainable.

5. Capacity Building and Institutional Growth

Developing the system internally:

- Strengthens the technical capacity of the IT Directorate.
- Enhances collaboration between IT and Library Directorates.
- Creates opportunities for future student internships or capstone projects.
- Encourages innovation within the University.

Rather than outsourcing digital transformation, UniMAC builds internal expertise.

6. Scalability and Future Expansion

An in-house system can later be expanded to include:

- Model answers (where appropriate)
- Continuous assessment archives
- Research project repositories
- Faculty publication indexing
- Analytics dashboards for academic planning

Thus, the Past Questions Portal can evolve into a broader Academic Digital Repository System.

3. Why This Project Is Necessary Now

The existence of similar systems at institutions such as:

- University of Mines and Technology
- University of Ghana

demonstrates that digital examination repositories are becoming a **standard academic support infrastructure**.

For UniMAC:

- Students already demand centralized digital access.
- Informal sharing channels are inefficient and inequitable.
- The infrastructure and expertise already exist internally.
- The cost barrier is minimal.

The question is no longer whether such a system is innovative—it is whether UniMAC should remain without one while peer institutions have already institutionalized similar platforms.

4. Conclusion of Benchmark Review

The review confirms that:

- Past Questions Portals are established best practice in higher education.
- Existing implementations often rely on generalized or externally dependent systems.
- UniMAC has a unique opportunity to develop a **purpose-built, institutionally owned, secure, and scalable system**.

Therefore, this project is:

- Not experimental.
- Not speculative.
- Not financially burdensome.

It is a **strategic digital infrastructure investment** aligned with modern academic support standards.

Conclusion and Recommendation

The proposed Past Questions Portal aligns with the university's strategic goals of enhancing digital learning tools and academic support services. It is a cost-effective, impactful initiative that leverages interdepartmental collaboration to deliver long-term benefits to the student body and academic staff.

Next Steps

1. Approval of the proposal by the management.
2. Formation of a project team.
3. Kickoff meeting to initiate the project.

References

ProjectSend. (n.d.). *ProjectSend: Open source file sharing software*.

<https://www.projectsend.org/>

University of Ghana. (n.d.). *Balme Library past examination papers portal*.

<https://balme.ug.edu.gh/past.exampapers/index.php>

University of Mines and Technology. (n.d.). *Past questions portal*.

<https://past.streetsensegh.org/>

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