Internship Report
On
Challenges in ERP Adoption in Small-to-Mid-Sized Educational Organizations in Bangladesh: A Case Study of GlobalED

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Submitted to:
Department of Business Administration
Faculty of Business
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Submitted in partial fulfillment of the requirements for the Bachelor of Business Administration (BBA) degree in Management Information Systems (MIS)

Date of Submission: 30 August 2025

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Submitted in partial fulfillment of the requirements for the Bachelor of Business Administration (BBA) degree in Management Information Systems (MIS)

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Letter of Transmittal

30 August 2025

Md. Fajle Rabbi

Lecturer

Department of Business Administration

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Sonargaon University (SU)

Subject: Submission of Internship Report

Dear Sir,

I am pleased to submit my internship report entitled **"Internship Report on Challenges in ERP Adoption in Small-to-Mid-Sized Educational Organizations in Bangladesh: A Case Study of GlobalED"** which has been prepared as a partial fulfillment of the requirements for the degree of **Bachelor of Business Administration (BBA)** in MIS at Sonargaon University (SU).

This report is based on my internship experience at **GlobalED**, where I had the opportunity to observe and analyze the practical challenges of ERP adoption in an educational organization. I have made every effort to present the findings accurately and to relate them to the theoretical knowledge acquired during my coursework.

I sincerely hope that the report will meet your expectations and provide valuable insights into the subject matter. I will remain grateful for any feedback you may have for further improvement.

Sincerely yours,

_____

Md. Akib Jabed Khan

ID: BBA2103024008

Program: Bachelor of Business Administration (BBA)

Major: Management Information Systems (MIS)

Sonargaon University (SU)

Declaration of the Student

I hereby declare that the internship report entitled **"Internship Report on Challenges in ERP Adoption in Small-to-Mid-Sized Educational Organizations in Bangladesh: A Case Study of GlobalED"** has been prepared by me as a partial fulfillment of the requirements for the degree of **Bachelor of Business Administration (BBA)** in Management Information Systems (MIS) at Sonargaon University (SU).

This report is the result of my own work, based on the internship I carried out at **GlobalED**. It has not been submitted to any other institution, university, or organization for any academic or professional purpose. All sources of information have been duly acknowledged.

Sincerely yours,

Md. Akib Jabed Khan

ID: BBA2103024008

Program: Bachelor of Business Administration (BBA)

Major: Management Information Systems (MIS)

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Letter of Authorization

This is to certify that the internship report entitled **"Internship Report on Challenges in ERP Adoption in Small-to-Mid-Sized Educational Organizations in Bangladesh: A Case Study of GlobalED"** has been prepared in partial fulfillment of the requirements for the degree of **Bachelor of Business Administration (BBA)** in Management Information Systems (MIS), Department of Business Administration, Sonargaon University (SU). The report has been carried out by **Md. Akib Jabed Khan**, bearing **ID: BBA2103024008**, under my supervision. The report or any part of the information contained herein will not be used for any other purpose.

Md. Fajle Rabbi

Lecturer

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Acknowledgements

First and foremost, I am profoundly grateful to the Almighty for granting me the strength, patience, and opportunity to successfully complete my internship and prepare this report.

I would like to express my heartfelt gratitude to my academic supervisor, **Md. Fajle Rabbi**, Lecturer, Department of Business Administration, Sonargaon University, for his continuous guidance, valuable suggestions, and encouragement throughout the preparation of this report.

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Finally, I would like to express my gratitude to my family and friends for their encouragement, understanding, and unwavering support during the entire process.

Executive Summary

This internship report examines the challenges of Enterprise Resource Planning (ERP) adoption in small-to-mid-sized educational organizations in Bangladesh, with a particular focus on the case study of **GlobalED**, a Dhaka-based education service provider. ERP systems promise efficiency, integration, and streamlined operations, yet their successful implementation often encounters significant obstacles in resource-constrained and evolving educational environments.

The study highlights how **GlobalED** attempted to adopt an ERP solution to manage its administrative, academic, and financial processes. The findings reveal that although the organization recognized the potential benefits of ERP—such as reducing manual workload, minimizing data redundancy, and improving decision-making—its journey was hindered by a series of technological, organizational, and external challenges.

The report also emphasizes broader implications for similar institutions across Bangladesh and South Asia. It suggests that ERP adoption is not only a matter of technology, but also of strategic planning, cultural readiness, and stakeholder involvement. Best practices such as phased rollouts, automated workflows for fee reminders and data validation, and stronger project management frameworks could help institutions overcome barriers.

This case study contributes to the understanding of ERP adoption in resource-constrained educational organizations, offering both theoretical insights and practical recommendations. It is expected that the lessons drawn from **GlobalED's** experience will assist policymakers, educational administrators, and ERP vendors in designing more sustainable and context-sensitive ERP strategies for the Bangladeshi education sector.

List of Abbreviations

CoPs — Communities of Practice

CSFs — Critical Success Factors

ERP — Enterprise Resource Planning

HD — Hybrid Deployment

LMS — Learning Management System

LS — Legacy Systems

PI — Phased Implementation

SI — System Integration

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Chapter 1: Introduction

1.1 Background of the report

Enterprise Resource Planning (ERP) refers to a suite of integrated applications that share a common database and streamline processes across functions such as finance, HR, procurement, inventory, and student management. Globally, ERP evolved from manufacturing-focused MRP systems in the 1980s to enterprise-wide platforms by the late 1990s. Recent adoption trends include the shift from on-premises to cloud-based SaaS models and the rise of industry-specific, configurable solutions with faster deployment.

Key drivers for ERP adoption include process standardization, real-time visibility, regulatory compliance, and improved decision-making. Yet adoption is often difficult due to high costs, change resistance, data migration risks, and mismatches with local practices. For small and mid-sized organizations, these barriers are magnified by tight budgets, lean IT capacity, and operational pressures. As a result, many pursue phased rollouts, hybrid systems, or modular subscriptions to manage risk and cost.

In South Asia, ERP adoption is growing with digital infrastructure, competitive pressures, and government initiatives. Large universities often deploy full suites, while smaller institutions adopt only essential modules such as admissions, fees, payroll, or examinations. Regional vendors offer localized, education-focused solutions with language support and mobile payment integration. Nonetheless, institutions face challenges with internet reliability, uneven vendor quality, and limited post-implementation support.

Bangladesh mirrors these patterns. While the “Digital Bangladesh” agenda has boosted awareness, adoption in small-to-mid-sized educational organizations remains limited. Typical entry points are digitizing admissions, fee collection, and payroll, but institutions struggle with outdated infrastructure, dependence on a few IT staff, and poorly documented legacy processes. Data quality and migration are common pain points, as fragmented records hinder integration into a unified ERP system.

The COVID-19 pandemic accelerated temporary use of digital tools, but many adoptions lacked proper process redesign, resulting in parallel systems and user fatigue. Post-pandemic, attention is shifting to integrated platforms that can manage academic and administrative functions end-to-end. For education specifically, ERPs must integrate with learning management, library, exam, and communication systems while accommodating academic calendars, scholarships, and regulatory requirements—often requiring heavy configuration.

For GlobalED, a mid-sized private institution in Dhaka, ERP adoption reflects sector-wide goals: better student and parent services, stronger financial controls, and evidence-based management. Yet the same constraints that make ERP valuable—process fragmentation, limited visibility, and manual workloads—also make adoption difficult, due to budget limits,

scarce expertise, and change resistance. This study examines GlobalED's experience within the broader global and South Asian context, highlighting factors that shape ERP adoption and practical steps for institutions of similar scale.

1.2 Objectives of the Study

The primary objective of this internship report is to identify and analyze the challenges faced in adopting ERP systems in small-to-mid-sized educational institutions in Bangladesh. Specific objectives include:

- To understand the ERP implementation process at GlobalED.
- To identify key barriers to ERP adoption in similar organizations.
- To analyze the internal and external factors influencing ERP success.
- To provide practical recommendations for improving ERP adoption.

1.3 Scope of the Study

This report is based on an internship at GlobalED, focusing on its attempt to implement an ERP system and the organizational, technical, and cultural challenges faced. While centered on GlobalED, the analysis highlights issues likely relevant to other small and medium-sized educational institutions in Bangladesh, particularly urban organizations with limited resources. The study examines adoption barriers such as cost, user readiness, infrastructure, and change management capacity.

The findings are also considered in the context of similar institutions across South Asia, offering insights for mid-tier schools, colleges, and training centers facing modernization pressures. The scope balances a detailed case study with cautiously transferable lessons for comparable educational organizations in emerging economies.

1.4 Methodology

This study uses a qualitative research approach. Data was collected through direct observation, informal interviews with GlobalED staff, internal documents, and participation in ERP implementation activities. Secondary data was obtained from academic journals, ERP vendor documentation, and existing literature on ERP challenges in developing countries.

1.5 Limitations of the Study

While this report provides a detailed case study of ERP adoption at GlobalED, certain limitations should be noted:

- Single-Case Focus: The study focuses on one mid-sized educational organization, which may limit the generalizability of findings to all small-to-mid-sized institutions in Bangladesh or other countries.
- Time Constraints: The internship period was limited, which restricted the ability to observe long-term outcomes of the ERP implementation, such as sustained user adoption or measurable improvements in efficiency.
- Data Availability: Access to certain internal reports, financial data, and detailed system logs was restricted for confidentiality reasons, which may have limited the depth of some analyses.
- Informal Interviews: Some of the qualitative data were collected through informal discussions rather than structured interviews or surveys, which may introduce subjective bias.
- Rapidly Changing Context: ERP adoption and IT infrastructure in Bangladesh are evolving rapidly; therefore, some findings may become less representative over time.

Despite these limitations, the report provides meaningful insights into the challenges and potential solutions for ERP adoption in small-to-mid-sized educational organizations in Bangladesh.

Chapter 2: Literature Review

2.1 Overview of ERP Systems

An ERP (Enterprise Resource Planning) system is software designed to integrate and manage an organization's core business processes in a unified platform. It connects functions like finance, human resources, supply chain, manufacturing, sales, and customer service, allowing for seamless data flow and real-time visibility across the organization. By centralizing information, ERP systems reduce errors, eliminate redundant tasks, and support data-driven decision-making. They also improve operational efficiency, facilitate reporting and analytics, and help businesses scale more effectively. Although implementing an ERP can be complex and costly, with challenges such as customization and user adoption, the benefits of streamlined processes, better collaboration, and improved productivity make it a valuable tool for organizations of all sizes. Popular ERP solutions include SAP, Oracle NetSuite, Microsoft Dynamics 365, and Odoo.

2.2 ERP in the Education Sector

In the education sector, ERP systems help institutions manage administrative and academic processes in a single platform. They streamline student admissions, attendance, grading, fee collection, timetable scheduling, and faculty management, improving efficiency and reducing errors. By centralizing data, these systems support real-time reporting, informed decision-making, and better communication among students, teachers, and parents, enhancing the overall functioning of the institution.

2.3 Challenges in ERP Adoption Globally

Globally, the adoption of Enterprise Resource Planning (ERP) systems presents significant challenges, particularly for small and medium-sized enterprises (SMEs) and educational institutions. Common barriers include high implementation costs, organizational resistance to change, lack of technical expertise, and weak alignment between ERP systems and institutional goals (Haddara & Moen, 2017).

2.3.1 Case Studies and Statistics:

- European SMEs: A European Commission survey (2019) found that many SMEs struggle to adopt advanced digital technologies, including ERP, primarily due to financial constraints and a shortage of skilled personnel. Resistance to organizational change was also identified as a persistent barrier to digital transformation.

- U.S. Higher Education Institutions: EDUCAUSE (2023) reported that 51% of higher education institutions experienced operational disruptions following ERP implementation. The study emphasized that inadequate planning, insufficient staff training, and lack of stakeholder engagement were the most common causes of failure.
- Australian Local Governments: A TechnologyOne report (2020) noted that ERP implementations in Australian local councils often take three to five years, during which community needs evolve, leaving systems outdated by the time they are launched. Moreover, many implementations exceeded budgets, often costing three to four times the original estimates.

These examples underscore that while ERP systems offer efficiency gains, successful adoption requires careful attention to financial planning, staff readiness, and alignment with organizational needs. Addressing these challenges is crucial for ensuring the effective implementation and utilization of ERP systems.

2.4 ERP Adoption in Bangladesh

ERP systems have gradually gained traction in Bangladesh as organizations aim to streamline operations, improve data accuracy, and enhance decision-making. While large universities and corporations have successfully implemented ERP platforms, small-to-mid-sized institutions, especially in the education sector, face unique challenges. High initial costs, resistance to change among staff, data migration complexities, and vendor selection issues often slow down adoption and limit system effectiveness.

Notable examples include the Bangladesh University of Professionals (BUP), which developed a customized ERP system to automate academic, financial, and administrative functions. Government initiatives, such as those by the Bangladesh Computer Council (BCC), are gradually improving ICT infrastructure and providing training programs to enhance digital literacy, supporting ERP adoption. Customizing ERP systems to meet local requirements—such as regulatory compliance, language support, and institutional workflows—has also proven essential for successful implementation. Overall, while adoption is still uneven, the trend indicates growing awareness and potential for broader ERP integration in Bangladeshi educational institutions.

2.5 Theoretical Framework and ERP Adoption Models

The analysis of ERP adoption in this report is guided by well-established theoretical frameworks that explain how technological, organizational, and environmental factors

influence successful implementation. Two widely recognized models are the Technology-Organization-Environment (TOE) framework and the Critical Success Factors (CSF) model.

The TOE framework posits that three contexts determine technology adoption:

- Technological Context: Attributes of the ERP system such as functionality, compatibility, complexity, and cost.
- Organizational Context: Size, structure, human resources, and readiness for change.
- Environmental Context: External pressures including market competition, regulatory requirements, vendor support, and socio-economic conditions.

The CSF model identifies specific factors that must be managed carefully to achieve ERP success. These typically include top management support, project management capability, user training, clear goals and objectives, and data quality.

ERP adoption literature also employs other models such as Diffusion of Innovation (DOI) and Unified Theory of Acceptance and Use of Technology (UTAUT), which emphasize user acceptance, perceived usefulness, and behavioral intention to use the system. These models complement TOE and CSF by providing insights into individual and group behaviors within organizations.

Table 1: Key Factors Influencing ERP Adoption (Summary Table)

Factor Category	**Specific Factors**	**Description**
Technological	System compatibility, functionality, complexity, cost	How well the ERP system fits existing processes and IT infrastructure, and the perceived difficulty or expense of implementation
Organizational	Size, structure, culture, management support, staff IT skills	Internal readiness, leadership involvement, employee capabilities, and openness to change
Environmental	Market competition, regulatory requirements, vendor support, socioeconomic context	External pressures and support systems that facilitate or hinder ERP adoption

User Acceptance	Perceived usefulness, ease of use, behavioral intention	Derived from DOI and UTAUT, highlighting the role of user perception in adoption success
Critical Success Factors	Clear objectives, project management, data quality, training, top management engagement	Essential elements identified in CSF literature that must be addressed for successful implementation

Chapter 3: Organizational Overview

3.1 Overview of GlobalED

GlobalED and its sister organization, Global Citizen Limited, are mid-sized educational institutions based in Dhaka that provide both secondary and higher secondary education. With an enrollment of over 1,000 students and a staff strength of approximately 100, the institution has experienced steady growth in recent years and has recently undertaken an initiative to digitize its operations through the implementation of an Enterprise Resource Planning (ERP) system.

Global Citizen Limited is an accredited body for the International English Language Testing System (IELTS), operating as an authorized testing center. It manages IELTS registration for candidates preparing to sit for the examination and also serves as an official test venue. Furthermore, the organization provides preparatory courses designed to enhance students' performance in the IELTS examination.

In addition to these services, GlobalED seeks to address broader educational and professional challenges by offering comprehensive academic and vocational programs. As an approved center of Edexcel, the organization is authorized to deliver a range of BTEC Diploma programs in disciplines such as Business, Human Resource Management, Marketing, and Hospitality. These programs, which typically span between six months and two years, provide graduates with the opportunity to transfer academic credits to higher education institutions in the United Kingdom, Australia, Canada, and New Zealand, where BTEC qualifications are widely recognized. Moreover, the qualifications enable graduates to pursue employment opportunities directly in the United Kingdom, Australia, the United States, and Gulf countries. All courses are conducted in English, though some students may require supplementary instruction to strengthen their technical English proficiency and ensure success in examinations.

3.2 Vision

GlobalED aspires to become a leading, internationally recognized provider of education and training in Bangladesh. The organization seeks to empower the country's youth and unemployed population by fostering personal and professional growth. Its vision emphasizes the development of skills, knowledge, and attitudes among corporate executives, while maintaining strategic collaborations with globally reputed education and training organizations. A particular focus is placed on enhancing English language proficiency for both students and professionals, recognizing its importance in academic, professional, and international contexts.

3.3 Mission

The mission of GlobalED is to expand access to international education and employment opportunities for students and executives in Bangladesh across multiple levels of study and professional development.

3.4 Goals

- To prioritize the development of English language proficiency in parallel with professional skills in areas such as General Management, Hospitality Management, Strategic Management, and Service Marketing, delivered through internationally recognized qualifications such as Pearson's BTEC Levels 4, 5, 6, and 7.
- To strengthen the skills, knowledge, and professional attitudes of corporate executives to meet international standards.
- To secure at least a 10% share of the skill-oriented education and training market in Bangladesh, thereby establishing a stronger presence in the sector.

3.5 MIS Practices in GlobalED

GlobalED has increasingly recognized the importance of Management Information Systems (MIS) in streamlining operations, improving decision-making, and supporting institutional growth. As a mid-sized educational organization, it relies on information systems to manage academic, administrative, and strategic activities.

Currently, GlobalED uses MIS practices in the following areas:

- Student Information Management: Student data, including enrollment records, academic performance, and attendance, is systematically recorded and maintained. This enables accurate monitoring of student progress and assists in timely reporting for both internal and external stakeholders.
- Academic Administration: MIS supports the scheduling of classes, allocation of faculty, and maintenance of examination records. This reduces manual errors and improves efficiency in academic operations.
- Human Resource and Staff Management: Information systems are utilized for maintaining staff records, monitoring performance, and managing payroll. This allows for greater transparency in HR practices and efficient handling of employee-related information.

- Financial Management: Basic MIS tools are applied in budgeting, fee collection, and expense tracking. This ensures better financial control and facilitates data-driven decision-making in resource allocation.
- Communication and Reporting: MIS assists in generating regular reports for management, enabling evidence-based decision-making. It also supports communication with students, parents, and staff members through structured information channels.

In recent years, GlobalED has attempted to extend these practices through the implementation of an Enterprise Resource Planning (ERP) system. The goal of this initiative is to integrate academic, administrative, financial, and human resource functions into a single digital platform. While the transition is ongoing, the effort reflects GlobalED's commitment to advancing MIS practices and aligning itself with international standards of institutional management.

3.6 SWOT Analysis

A SWOT analysis provides a structured view of GlobalED's internal strengths and weaknesses, along with the external opportunities and threats that shape its operational environment. This framework helps explain why ERP adoption is relevant and what risks or advantages may emerge during implementation.

Table 2: SWOT Analysis of GlobalED

Strengths	**Weaknesses**	**Opportunities**	**Threats**
Reputation as a mid-sized education provider with growing enrollment and a diverse program portfolio.	Heavy reliance on manual processes for finance, HR, and academic records, leading to inefficiencies.	Growing demand for integrated digital services in the education sector (online admissions, fee collection, academic monitoring).	Strong competition from other institutions already adopting ERPs and advanced LMSs.

Strong commitment from top management toward digital transformation and service quality improvement.	Limited internal IT capacity; dependence on a small team for support and system maintenance.	Government and accreditation bodies encouraging digital record-keeping and compliance reporting.	Cybersecurity and data privacy risks, especially with sensitive student/parent information.
Good stakeholder engagement culture—parents and students value transparency and communication.	Data scattered across spreadsheets and legacy systems, complicating accuracy and reporting.	Access to cloud-based, SaaS ERP solutions with lower upfront costs and faster deployment.	Potential budget constraints in case of external shocks (economic downturn, enrollment fluctuations).
Stable financial footing, allowing investment in technology projects like ERP.	Staff resistance to change due to unfamiliarity with enterprise systems.	Scope to integrate ERP with LMS and mobile apps, improving stakeholder experience.	Failure to manage change effectively could result in low adoption and sunk costs.

3.6.1 Implications for GlobalED

- Leverage Strengths & Opportunities: GlobalED can capitalize on its stable finances and leadership commitment to position ERP as a flagship modernization initiative.
- Address Weaknesses & Mitigate Threats: Training programs, phased implementation, and strong vendor partnerships will be essential to overcome resistance and capacity gaps.

Chapter 4: Discussion of ERP Adoption Challenges

Enterprise Resource Planning (ERP) adoption has been extensively studied in organizational and academic contexts, with scholars consistently noting that its success depends on a combination of technological, organizational, and environmental factors. Unlike conventional software, ERP is deeply transformative, requiring institutions to reconfigure workflows, cultural norms, and stakeholder relationships. In educational institutions, these challenges are magnified by resource constraints, entrenched administrative cultures, and regulatory pressures. This chapter discusses ERP adoption challenges from a largely academic perspective, drawing on models and frameworks while using GlobalED as an occasional example to illustrate how these theories play out in practice.

4.1 Technological Readiness in ERP Adoption

4.1.1 The Role of Infrastructure Capacity

ERP adoption presupposes a strong technological base, including servers, stable internet, and updated client systems. In contexts such as Bangladesh, institutions often invest in software licenses before strengthening infrastructure, which leads to system bottlenecks. Studies highlight that downtime, poor bandwidth, and outdated devices discourage user confidence in ERP systems. GlobalED reflects this broader trend: its server and computers were inadequate, echoing challenges documented in many developing countries. Without addressing infrastructure first, institutions risk creating an ERP system that looks good on paper but fails in daily practice. The psychological impact is equally important, as repeated technical failures reinforce skepticism among users.

4.1.2 Data Integrity and Migration Complexity

The transition from legacy systems to integrated ERP platforms is complicated by data quality issues. Literature identifies inconsistent formats, duplicate entries, and incomplete records as common sources of failure in ERP projects. Without structured data governance, ERP systems embed flawed information, reducing their reliability. GlobalED's difficulties with duplicate student records are a practical manifestation of this well-documented challenge. Data migration projects therefore require significant planning, cleansing, and stakeholder involvement. Institutions that neglect this step often spend more time correcting errors post-implementation than they would have spent preparing data beforehand.

4.1.3 Skills Gaps and Technical Literacy

ERP demands technical skills across multiple layers—database administration, troubleshooting, and user support. Institutions lacking this expertise often face delays, misconfigurations, and high reliance on vendors. The situation at GlobalED, where staff had limited ERP-specific skills, mirrors findings in higher education literature, where inadequate training is consistently linked to adoption delays. Skills gaps not only affect IT staff but also extend to end-users, many of whom may struggle with digital literacy. This creates uneven adoption rates within the same institution, with some departments adapting faster than others.

4.1.4 The Customization–Standardization Dilemma

Scholars frequently discuss the trade-off between tailoring ERP to match existing practices and aligning organizational processes with ERP best practices. Over-customization creates maintenance burdens and upgrade problems, while strict standardization may alienate staff. GlobalED's push for customizations is a localized example of a globally recognized dilemma. Striking the right balance requires leadership to prioritize long-term sustainability over short-term convenience. Institutions that lean too heavily on customization often find themselves locked into outdated versions that are costly to maintain.

4.1.5 Security and Privacy as Emerging Concerns

ERP systems consolidate sensitive personal, academic, and financial data, creating concerns about confidentiality, integrity, and availability. Academic work on ERP in higher education stresses the importance of role-based access, encryption, and compliance with data protection laws. GlobalED's lack of robust cybersecurity mirrors the vulnerabilities highlighted in literature, particularly for resource-constrained institutions. The growing regulatory environment means institutions can no longer afford to treat security as secondary. Moreover, a single breach can permanently undermine institutional trust among students, parents, and regulators.

Table 3: Technological Readiness Factors in ERP Adoption

Factor	**Description**	**Implication for ERP Adoption**
Infrastructure	Servers, client hardware, internet, backup	Weak capacity leads to downtime, mistrust

Data Quality	Consistency, completeness, accuracy of records	Poor data causes errors and inefficiency
Technical Skills	IT staff capacity, user digital literacy	Skills gaps slow adoption, increase errors
Customization Balance	Trade-off between tailoring and standardizing	Over-customization complicates upgrades
Security Measures	Role-based access, encryption, monitoring	Weak security undermines trust, compliance

4.2 Organizational Dynamics in ERP Implementation

4.2.1 Behavioral Resistance and Change Models

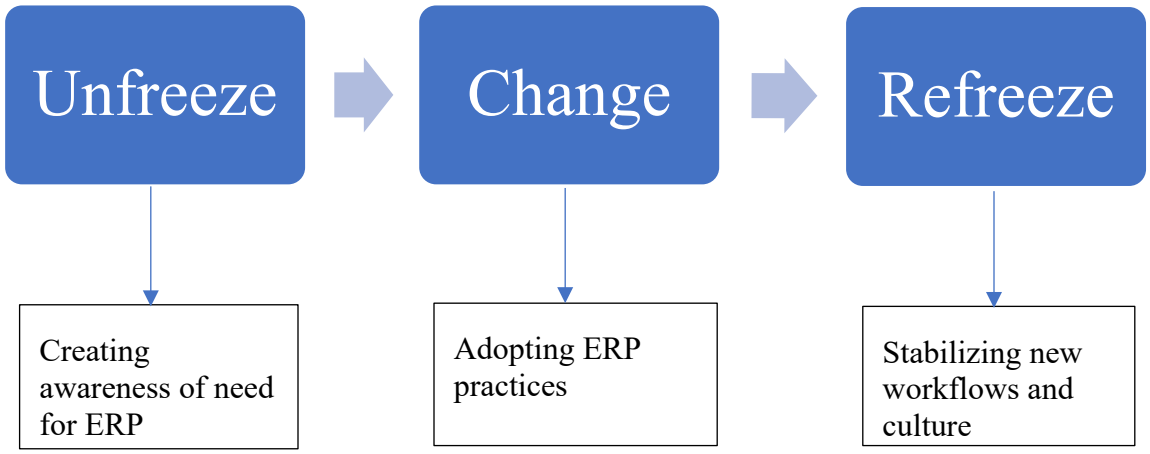


Figure 1: Lewin's Change Management Model Applied to ERP

Change resistance is one of the most consistently documented ERP barriers. Lewin's three-step change model (unfreeze–change–refreeze) provides a theoretical lens: organizations must first destabilize old habits, then introduce new practices, and finally consolidate them. Educational institutions often fail at the "unfreeze" stage, leaving staff clinging to manual systems. At GlobalED, senior staff resisted abandoning traditional registers, which is a micro-level instance of this widespread barrier. Resistance is not only technical but also psychological, as staff often fear redundancy or a loss of authority. Without communication campaigns and incentives, change efforts frequently stall.

4.2.2 Interdepartmental Integration

ERP demands horizontal coordination across academic, financial, and administrative units. However, literature emphasizes that universities and schools often operate in functional silos, making integration difficult. This misalignment leads to duplication and bottlenecks, a problem also observed at GlobalED. Integration requires more than technical connections; it demands cultural cooperation and willingness to share data. Institutions that neglect the human side of integration often find that technical fixes alone are insufficient.

4.2.3 Governance and Project Management Structures

Effective ERP adoption requires strong project management structures, with clear milestones and accountability. Studies reveal that educational institutions often underestimate this need, treating ERP as a mere IT initiative. The lack of project governance at GlobalED exemplifies a challenge identified across global ERP adoption cases. Without project governance, ERP initiatives drift without clear priorities, leading to fragmented or incomplete adoption. Institutions that assign a dedicated project manager and steering committee generally achieve smoother rollouts.

4.2.4 Capacity Building and Knowledge Flows

Training is widely regarded as a critical success factor. Academic sources stress that training should be continuous, role-specific, and practical rather than one-time and generic. Inadequate knowledge transfer creates dependence on IT staff, which is both inefficient and unsustainable. GlobalED's short training programs reflect this theoretical point. Institutions that invest in ongoing training create a culture of learning that reinforces ERP adoption. Moreover, effective knowledge flows reduce the risk of staff turnover disrupting the entire system.

4.2.5 Strategic Leadership Involvement

Research consistently identifies top management support as the most important determinant of ERP success. Leaders must not only allocate resources but also actively champion the system to overcome resistance. At GlobalED, leadership's limited visibility during implementation echoes this theoretical insight. Leadership involvement sets the tone for how staff perceive ERP priorities. When leaders visibly support ERP, staff are more likely to commit to change and less likely to revert to manual practices.

4.3 Environmental and Institutional Pressures

4.3.1 Vendor Dependence and Market Constraints

ERP vendors in developing countries often lack specialization for education-sector needs. Literature shows that poor vendor support, slow customization, and misalignment with institutional requirements are common challenges. GlobalED's difficulties with its vendor parallel these broader trends. Institutions that rely too heavily on vendors without developing internal capacity risk becoming locked into unsustainable relationships. A careful vendor selection process is therefore essential for long-term success.

4.3.2 Infrastructural Fragility in Developing Economies

External connectivity challenges, particularly in developing economies, are identified as persistent barriers in ERP adoption. Dependence on unstable internet connections undermines cloud ERP functionality. GlobalED's experience of outages is representative of a structural challenge faced by many institutions. These external challenges often lie beyond the institution's control, making contingency planning critical. Institutions may need to explore hybrid systems to mitigate risks.

4.3.3 Stakeholder Expectations and Social Demands

Parents, students, and regulators increasingly demand digitized services. Academic literature frames this as an environmental pressure within the Technology–Organization–Environment (TOE) framework. Such pressures may accelerate ERP adoption but also force hasty, ill-prepared implementations. GlobalED's rushed timeline exemplifies this. Institutions under strong stakeholder pressure must balance short-term compliance with long-term capacity building. Failure to manage expectations can lead to dissatisfaction and disillusionment.

4.3.4 Financial Sustainability of ERP Projects

ERP systems are notorious for hidden costs: training, customization, and ongoing support. Studies indicate that projects often exceed budgets by two to three times initial estimates. GlobalED's underestimation of costs reflects a broader trend, particularly in resource-constrained educational institutions. Financial sustainability requires careful planning of not only initial but also ongoing costs. Without this, ERP projects risk collapsing under financial strain.

4.3.5 Regulatory and Compliance Imperatives

Compliance requirements from accreditation bodies act as external drivers of ERP adoption. Literature suggests that institutions often prioritize compliance over optimization, leading to partial or uneven adoption. GlobalED's case aligns with this dynamic. Institutions must view compliance as an opportunity to build robust systems rather than a box-ticking exercise. Doing so aligns external pressures with internal improvements.

4.4 Human and Cultural Dimensions of ERP Adoption

ERP implementation is not purely a technological initiative—it requires active participation, adaptation, and acceptance from the workforce. Human and cultural aspects often determine the success or failure of such projects. Employees may fear job losses, increased workload, or the need to adapt to unfamiliar systems. Overcoming resistance requires effective change management strategies that address psychological barriers and build trust.

4.4.1 Resistance to Change

Resistance is a natural reaction when individuals are required to alter established habits and workflows. Employees may perceive ERP as a threat to their authority, independence, or job security. In many cases, poor communication from management exacerbates these fears, leading to active or passive resistance. Mitigation strategies include early employee involvement, transparent communication, and adequate training programs to ensure a sense of inclusion and ownership.

4.4.2 Organizational Culture

The prevailing organizational culture heavily influences ERP adoption. Companies with hierarchical and rigid cultures may struggle with collaboration and knowledge sharing, which ERP systems require for success. Conversely, organizations with a culture of openness, teamwork, and adaptability often experience smoother transitions. Leaders must align cultural values with ERP objectives through continuous engagement, incentives, and reinforcement of collaborative behaviors.

4.4.3 User Training and Skill Development

Even the most advanced ERP system fails without competent end-users. Training programs must go beyond technical usage and demonstrate the practical value of ERP in daily tasks. Insufficient or rushed training often leads to underutilization of features and frustration among employees. A sustained focus on skill development, refresher sessions, and on-the-job support fosters confidence and increases adoption rates.

4.4.4 Change Management Practices

Change management plays a central role in navigating the human and cultural challenges of ERP adoption. Successful organizations treat ERP projects not just as IT upgrades but as business transformation initiatives. This requires leadership commitment, structured communication plans, and phased implementation strategies that minimize disruption. Building a network of change champions within departments also accelerates acceptance and reduces resistance.

4.5 Regulatory and Compliance Dimensions

ERP systems operate within the broader legal and regulatory environment that governs organizational activities. Ensuring compliance with tax laws, labor regulations, and data protection policies is essential to avoid legal risks. Failure to incorporate regulatory requirements during ERP design may result in costly penalties and reputational damage.

4.5.1 Data Privacy and Security Regulations

With increasing reliance on digital systems, organizations must comply with privacy laws such as the General Data Protection Regulation (GDPR) or local equivalents. ERP systems process sensitive employee, customer, and financial data, making compliance a top priority. Non-

compliance not only exposes the organization to legal action but also undermines customer trust.

4.5.2 Industry-Specific Compliance

Different industries face unique regulatory challenges when adopting ERP systems. For example, manufacturing companies must ensure compliance with product safety standards, while healthcare organizations must safeguard patient data. Tailoring ERP functionalities to these sectoral requirements ensures that operations remain lawful and efficient. Vendors often provide industry-specific modules, but organizations must verify their adequacy through compliance audits and legal consultations.

4.5.3 Audit and Transparency Requirements

ERP systems improve accountability by creating audit trails of transactions, but this benefit only materializes when organizations configure the system appropriately. Transparent processes not only meet regulatory standards but also strengthen internal governance. Periodic compliance reviews, integration with external auditing systems, and strong internal controls reduce risks.

4.6 ERP Enhancements and Automation

During the ERP implementation at GlobalED, several automation initiatives were undertaken by us to improve operational efficiency, reduce manual workload, and enhance data accuracy. These initiatives demonstrated hands-on technical skills in ERP configuration, database management, workflow automation, and system integration.

One key workflow addressed student fee management. The ERP system was configured to automatically identify students with overdue fees, generate personalized reminders, and notify parents via email and SMS. The process began with verifying and normalizing student and fee records, followed by creating an SQL view to extract accounts with pending payments. Workflow triggers were set for payments overdue by three days, and notifications were generated using pre-defined templates. Integration with the institution's SMTP server and SMS gateway API enabled automated delivery, while logging mechanisms tracked failed notifications. Testing in a sandbox environment ensured accurate functioning before deployment, and ongoing monitoring confirmed improvements in timely payments and reduced staff effort. The SQL code for extracting the unpaid students from the database is shown in Appendix C.

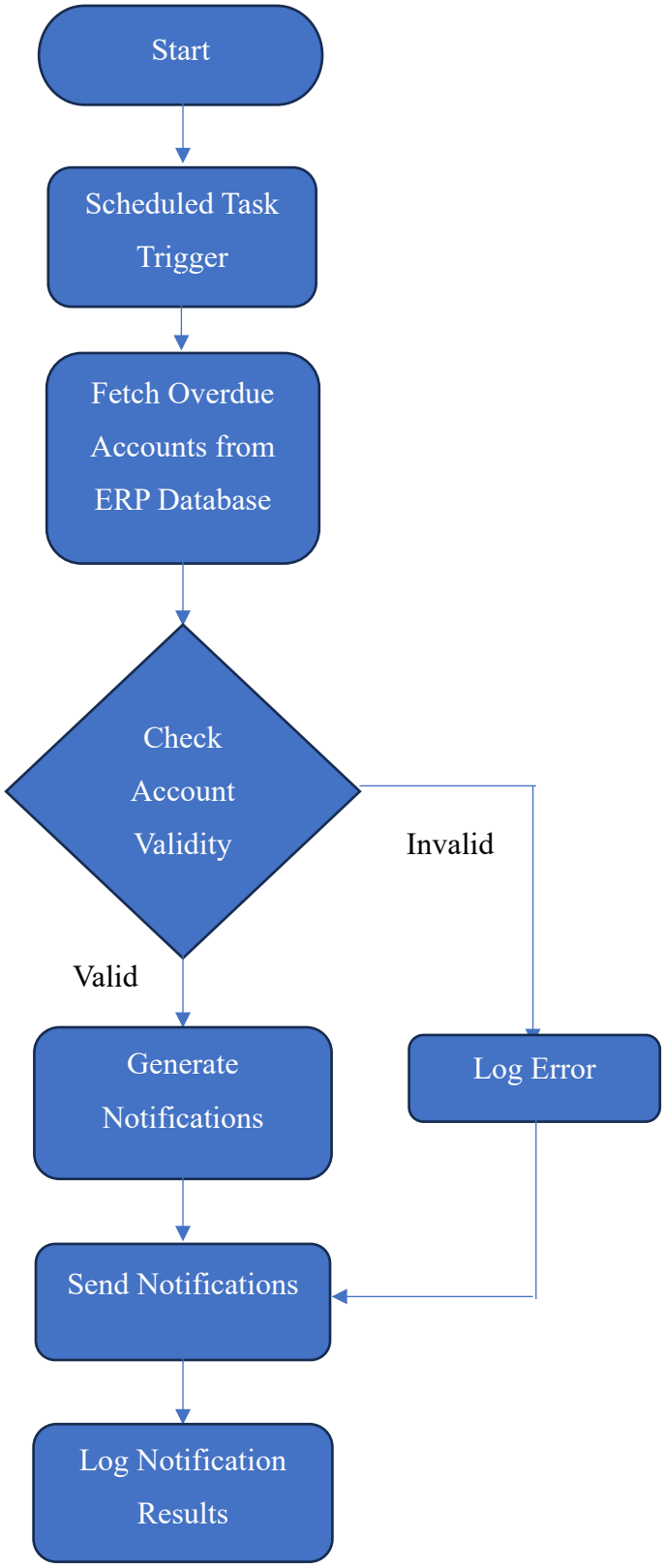


Figure 2: Automated Student Fee Reminder Workflow at GlobalED

Another automation focused on data validation to prevent redundancy and maintain database integrity. Redundant or inconsistent student and staff records had previously caused errors in reporting and operational inefficiencies. Automated scripts were created to identify duplicate entries using unique identifiers such as student ID, email, and contact number. The scripts also flagged missing mandatory fields and logical inconsistencies, such as fee payments recorded prior to admission. Identified duplicates generated reports for administrative review and correction, while scheduled runs and logging ensured continuous monitoring and error tracking. A relevant python code snippet is given in Appendix C.

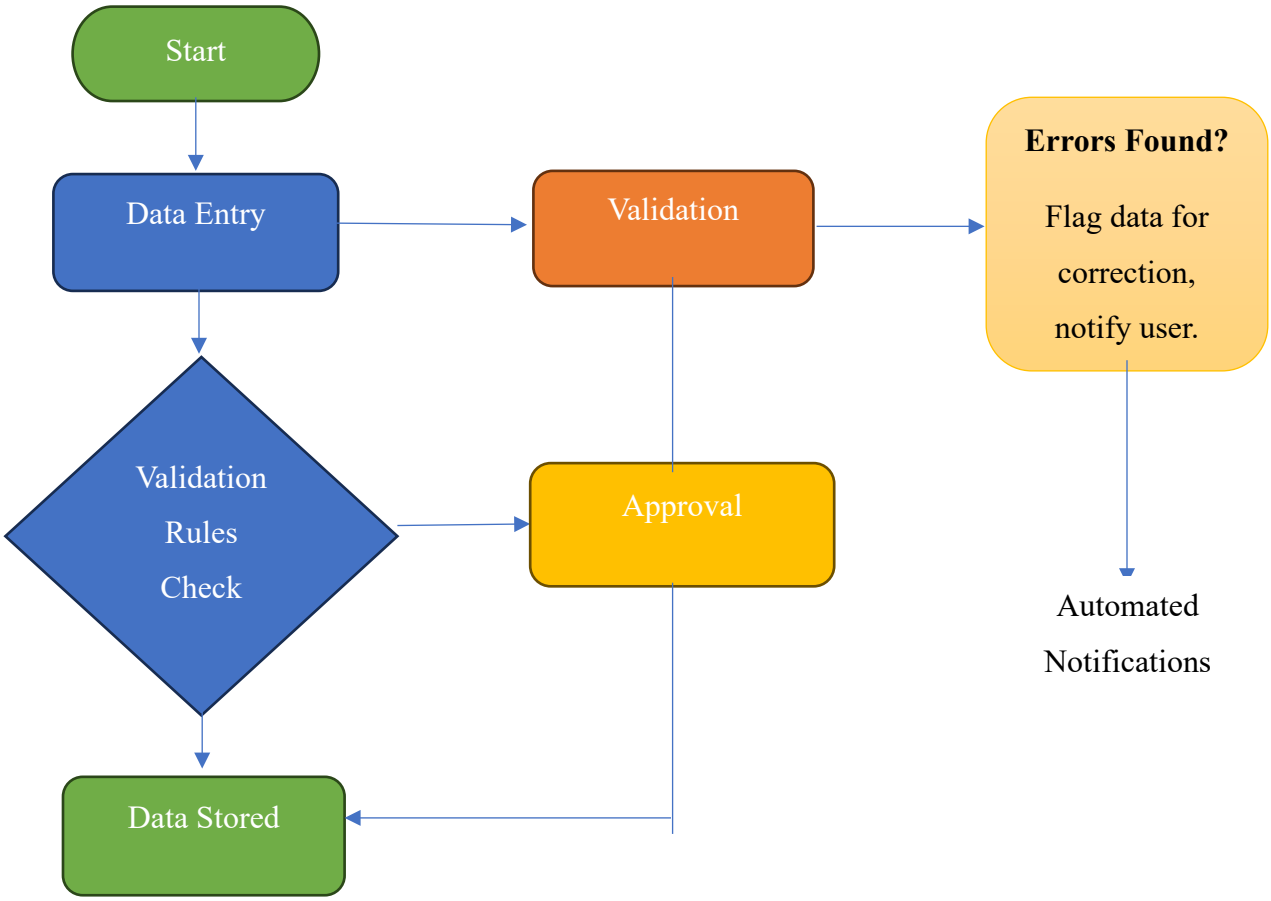


Figure 3: Flow Diagram of Automated Data Validation Process

Together, these ERP enhancements significantly streamlined GlobalED's administrative processes. The fee reminder workflow improved financial management, while automated data validation ensured accurate, consistent records across departments. These examples highlight practical applications of technical skills in ERP systems, SQL scripting, workflow design, and system integration, providing a replicable model for similar educational institutions aiming to optimize their ERP adoption.

4.7 Summary of Challenges

This chapter examined the diverse challenges organizations encounter when adopting ERP systems. Technological obstacles, such as system integration and data migration, must be addressed alongside organizational barriers like high costs, project complexity, and change resistance. Human and cultural dimensions further complicate adoption, as employees must adapt to new workflows and embrace continuous learning. Finally, regulatory and compliance requirements highlight the importance of aligning ERP systems with both industry and legal standards.

Ultimately, ERP adoption is not simply a technical upgrade but a multidimensional transformation. The success of such initiatives depends on a balanced approach that integrates technology, organizational readiness, human factors, and compliance measures. Organizations that anticipate and manage these challenges are more likely to achieve sustainable ERP benefits and maintain long-term competitiveness.

Chapter 5: Findings

5.1 Major Findings of the Study

- In GlobalED, technological constraints were among the most significant hurdles during ERP adoption. The institution relied on a single server with limited processing power and storage, which often crashed under heavy ERP usage. The lack of redundancy servers or backup systems further increased the risk of downtime. Also, many client machines were running outdated operating systems, which did not fully support the ERP modules.
- GlobalED experienced significant issues related to data management during ERP implementation. The existing database suffered from data redundancy, with the same student, staff, and financial information stored in multiple locations across different modules. Additionally, the lack of proper normalization and standardized entry procedures led to data inconsistency, where records for the same entity varied in format or content across departments.
- One of the most critical barriers to ERP adoption at GlobalED was the limited technical expertise among staff. Most employees, including administrative personnel and faculty, had minimal experience with enterprise systems or complex software platforms. As a result, they struggled to navigate the ERP modules, input data correctly, and interpret generated reports.
- The deficiency in technical skills also affected change management. Without proper training or a culture of digital literacy, employees were resistant to adopting new workflows, fearing errors and additional workload.
- Many teachers and administrative staff were hesitant to adopt new workflows. This resistance was fueled by fear of job redundancy, unfamiliarity with technology, and skepticism about whether the ERP system would genuinely improve efficiency. Employees preferred their existing manual or semi-automated processes, perceiving them as safer and more familiar despite their inefficiencies.
- The selected local ERP vendor lacked specialized experience in the education sector, which became evident during customization and integration tasks. Standard modules often did not fully align with academic workflows, requiring extensive modifications. Support response times were inconsistent, and troubleshooting often depended on repeated follow-ups.
- As GlobalED implemented a cloud-based ERP solution, internet reliability became a critical concern. Frequent outages, low bandwidth during peak hours, and occasional network latency disrupted access to the ERP system. These interruptions affected daily operations such as attendance recording, fee processing, and report generation.

- As the education technology market in Bangladesh is still developing, limited availability of ERP solutions tailored for small-to-mid-sized educational institutions restricted GlobalED's options. Many available products required significant customization or were costly, increasing both financial and operational risks. Additionally, emerging technologies such as mobile apps or analytics dashboards were not fully compatible with some ERP modules.
- External stakeholder expectations, including those of parents, students, and government authorities, placed pressure on GlobalED to implement digital systems quickly. The need to balance affordability with functionality created tension in selecting modules, vendor contracts, and implementation pace. Budget limitations, coupled with stakeholder expectations for immediate results, amplified stress on internal teams and contributed to slower adoption.
- Despite challenges, some departments like Finance and HR reported faster processing times and better record accuracy. With gradual familiarization, user engagement began improving.

Chapter 6: Recommendations and Conclusion

6.1 Recommendations Based on the Study

6.1.1 Pre-Implementation Planning

A successful ERP implementation requires careful preparation well before system deployment. Institutions similar to GlobalED can particularly benefit from applying the following lessons:

- Stakeholder Engagement: Involving faculty, staff, and administrative users early helps reduce resistance and ensures that requirements are properly captured.
- Data Readiness: Institutions should prioritize data cleaning, standardization, and validation in advance. Poor-quality data is one of the most common causes of ERP failures.
- Resource Allocation: Adequate budgeting for technical infrastructure, training, and support staff is crucial during the early phases.

These considerations, drawn from the case study findings, are not only applicable to the institution under review but also serve as actionable guidance for similar universities and organizations considering ERP adoption.

6.1.2 Staff Training and Involvement

Effective training is consistently identified as a critical success factor in ERP implementations. Traditional training approaches—especially one-time sessions—are often insufficient, as they overlook the importance of social learning and organizational context (Sun et al., 2005). In contrast, Communities of Practice (CoPs)—informal groups where experienced staff share tacit knowledge—have been shown to significantly enhance learning outcomes and bridge gaps in formal training (Improving Training in ERP Systems…, 2014). To address varying needs across user groups, institutions should implement tiered training modules. Active involvement of staff from early phases—such as requirements workshops and pilot testing—fosters ownership and mitigates resistance, a known barrier to ERP success (Factors for Implementation in Higher Education, 2018). Post-launch, training should not be one-off. An accessible knowledge repository—including FAQs, video guides, and community forums—alongside regular refresher sessions, supports continuous learning and ensures new staff are quickly onboarded.

6.1.3 Leadership Engagement

Institutional leaders must play active roles in governance, through steering committees, milestone reviews, and resource allocation. Their visible presence in project meetings and their endorsement of training and change initiatives help reinforce institutional commitment.

Moreover, leaders must communicate a compelling change narrative—explaining the strategic rationale, benefits, and relevance of the ERP in achieving institutional goals. Such messaging nurtures a shared vision, reduces fear, and encourages buy-in (Best Practice Models for ERP Implementation…, 2019). Finally, leadership must secure sufficient budgets—not only for implementation and infrastructure—but also for contingency, support, and continuous improvement. Underfunded systems struggle; well-resourced projects signal organizational seriousness and facilitate smoother execution.

6.1.4 Vendor Partnership

Institutions should select vendors with specialized expertise in the higher education sector, capable of adapting to academic workflows like course registration, research management, and student services (Understanding ERP in Higher Education, 2023). Once selected, a formal Service-Level Agreement (SLA) should be established to define uptime expectations, support responsiveness, upgrade pathways, and security standards. Regular review sessions—with both technical and functional stakeholders—encourage responsiveness and long-term collaboration. A dedicated vendor management team within the institution is essential to coordinate requests, priorities, and expectations, maximizing the vendor–institution partnership's value. This collaborative model enables the institution to evolve features, respond to new needs, and adapt over time.

6.1.5 Infrastructure Investment

ERP systems demand a robust and secure IT infrastructure. Inadequate infrastructure has consistently been flagged as a primary obstacle in higher education ERP projects (Technical-related CSFs, 2022). Institutions should conduct a comprehensive pre-implementation audit covering hardware, networking, storage, and backup systems. Any gaps identified should lead to targeted modernization efforts. Legacy hardware often results in slow performance and staff frustration. For cloud-based ERP platforms, internet reliability is non-negotiable. In environments with unstable connectivity, a hybrid deployment—supporting offline operations that sync when reconnected—can maintain continuity. Cybersecurity is another critical dimension. Measures such as segregation of duties (SoD), role-based access control (RBAC), encryption, intrusion detection, and regular security audits are essential, given the sensitive nature of institutional data (ERP Security Overview, 2025).

6.1.6 Data Governance and Quality Assurance

Institutions should establish strict data governance policies before ERP rollout. This includes standardizing data formats (e.g., student IDs, contact numbers), defining ownership of data within departments, and setting up periodic audits. A dedicated “data steward” role can minimize redundancy and inconsistencies.

6.1.7 Phased Implementation Approach

Rather than rolling out all ERP modules at once, a phased approach is more effective for smaller organizations. Starting with core modules (admissions, student records, finance) before gradually expanding (HR, library, academic scheduling) reduces risks and improves adoption.

6.1.8 Continuous Monitoring and Feedback

A feedback loop should be created where teachers, staff, and administrators can report ERP issues directly. Monthly review meetings and automated usage reports help track progress and address problems early.

6.2 Conclusion

ERP systems have the potential to significantly transform educational administration, particularly in resource-constrained environments such as Bangladesh. They offer a pathway to streamline operations, centralize data, and improve decision-making, thereby enhancing overall institutional performance. However, small-to-mid-sized institutions face a set of unique challenges, including limited technological infrastructure, tight budgets, and cultural or organizational resistance to change. The case study of GlobalED underscores that successful ERP adoption is not solely a technical exercise; it requires careful planning, robust staff training, active leadership engagement, and strategic vendor selection. Institutions that invest in these critical areas can mitigate implementation risks, foster staff ownership, and ensure the system aligns with organizational goals. Furthermore, adopting a phased or modular implementation approach, supported by continuous training and knowledge-sharing mechanisms, can help institutions gradually build capacity while minimizing disruption. Leadership commitment, coupled with an effective partnership with vendors, ensures that ERP systems remain responsive to evolving institutional needs. By systematically addressing these factors, educational organizations in Bangladesh can leverage ERP systems not just to improve administrative efficiency, but also to enhance service quality, compliance, and responsiveness to students, faculty, and stakeholders. Ultimately, ERP adoption can serve as a cornerstone for the digital transformation of the education sector, paving the way for more sustainable and scalable institutional development.

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Appendices

Appendix A: Interview Questionnaire

Purpose:

The following questionnaire was used to collect qualitative data from administrative staff and faculty regarding ERP implementation challenges and perceptions. The questions aim to understand system usability, training effectiveness, and change management experiences.

Section 1: Background Information

1. Name (optional):
2. Department:
3. Role/Position:
4. Years of experience in this institution:

Section 2: ERP Experience

5. Have you used an ERP system before?
    - Yes
    - No
6. How frequently do you use the ERP system?
    - Daily
    - Weekly
    - Monthly
    - Rarely
7. What modules do you primarily use? (Check all that apply)
    - Student Admission
    - Attendance & Grades
    - HR/Payroll
    - Finance & Accounting
    - Other

Section 3: Perceptions and Challenges

8. What do you consider the main benefits of the ERP system and What challenges have you faced while using it?

9. How effective was the training provided for using the ERP system?

- Very effective
- Somewhat effective
- Neutral
- Ineffective

Notes: Respondents were asked to complete this questionnaire during one-on-one interviews or via email submission. And all responses are kept confidential and used solely for research purposes in this report.

Appendix B: ERP Screenshots

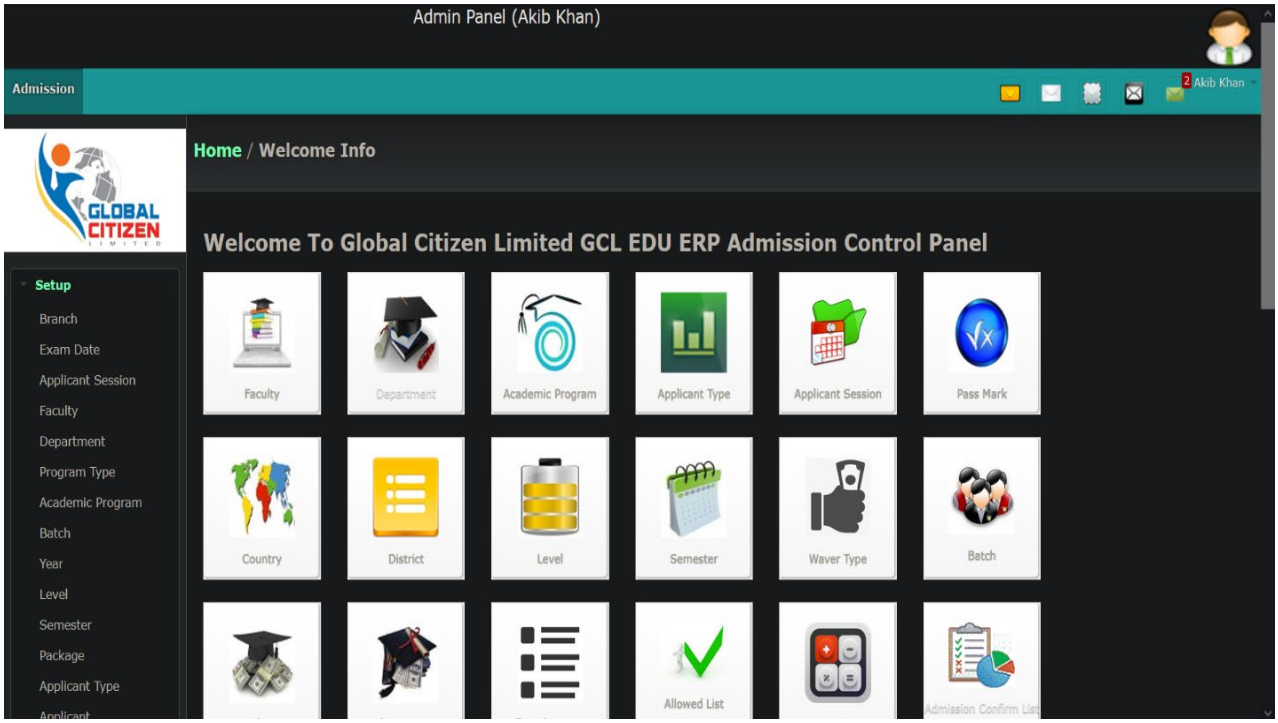


Figure B1: Login page of GlobalED ERP

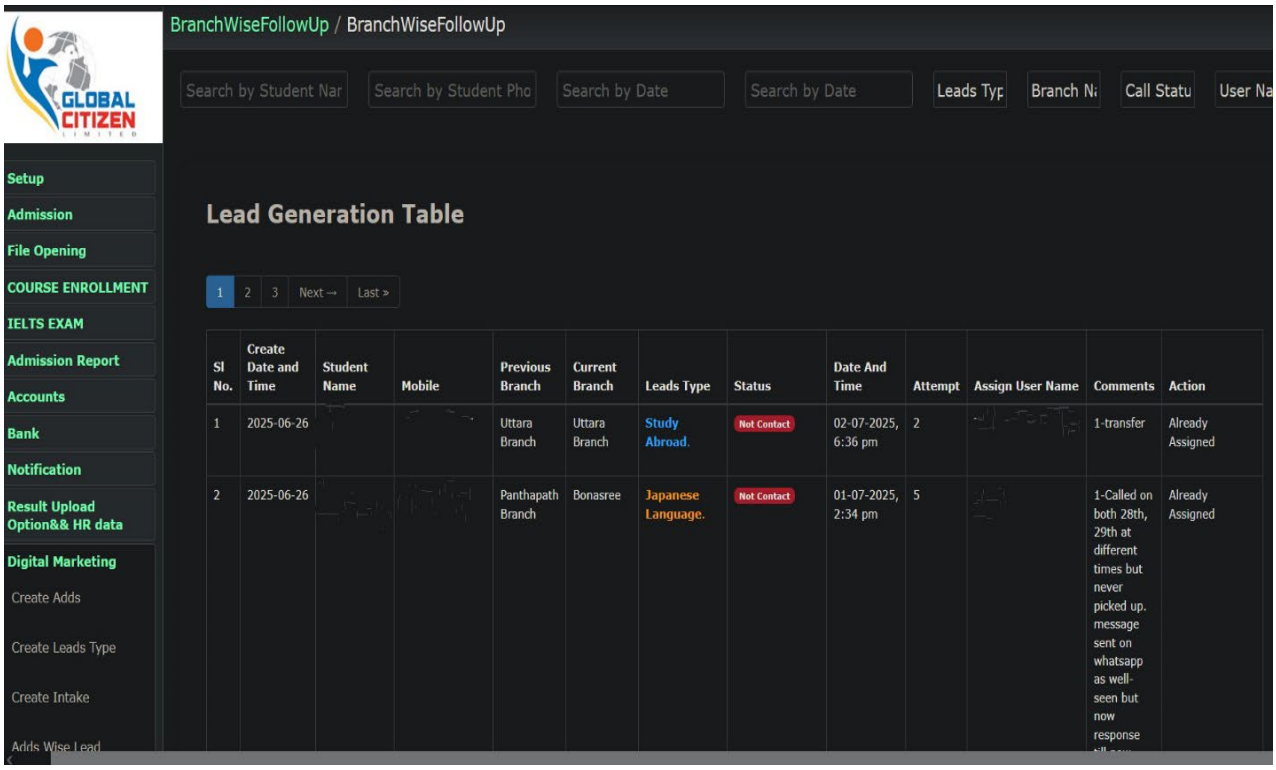


Figure B2: Student follow up page of GlobalED ERP

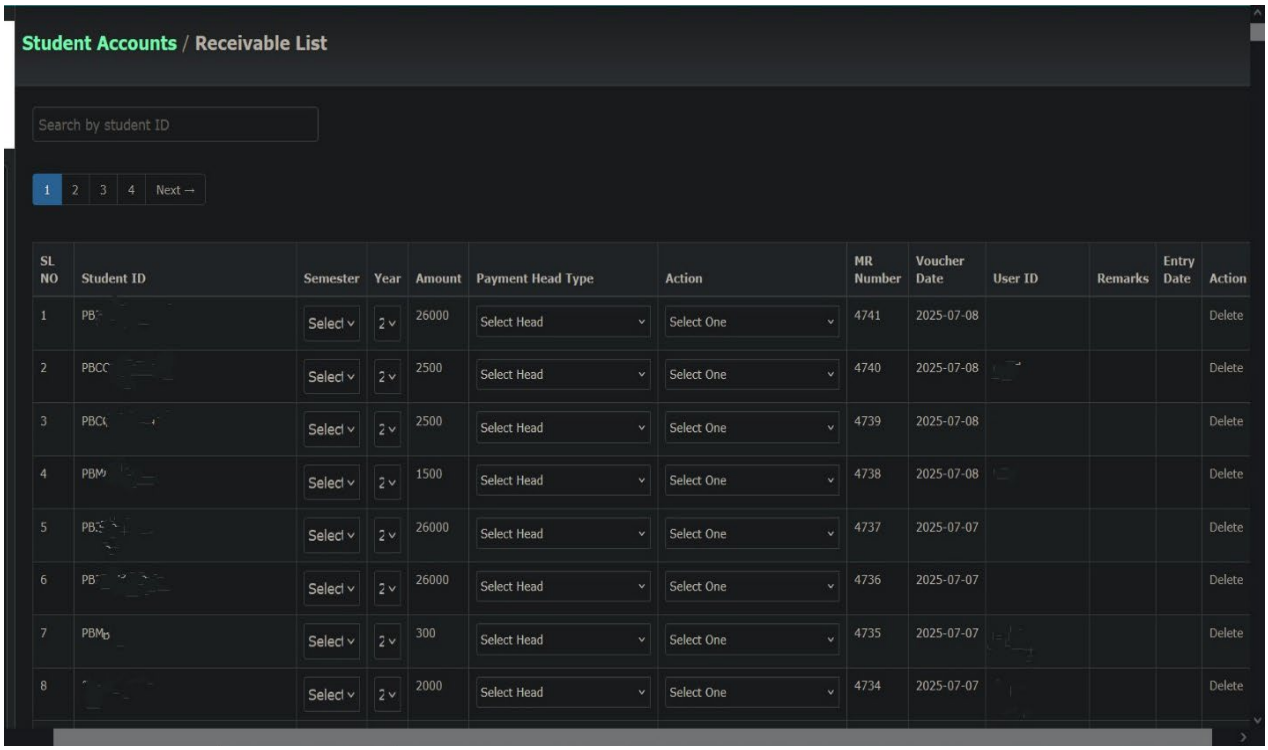


Figure B3: ERP accounts page

Appendix C: Code Snippets

Code for extracting the unpaid students

```
SELECT student_id, parent_email, parent_phone, fee_amount, due_date
FROM student_fees
WHERE payment_status = 'Pending' AND due_date < CURRENT_DATE;
```

Sample Validation Script Snippet

```
# Check for duplicate student IDs
cursor.execute("""
   SELECT student_id, COUNT(*)
   FROM students
   GROUP BY student_id
   HAVING COUNT(*) > 1;
""")
# Check for invalid emails
cursor.execute("""
   SELECT student_id, email
   FROM students
   WHERE email NOT LIKE '%@%.%';
""")
# Flag logical inconsistency: fee paid before admission
cursor.execute("""
   SELECT student_id, fee_date, admission_date
   FROM fees
   WHERE fee_date < admission_date;
""")
```