

Bridging Skill Gaps in Management Graduates through EdTech: Evidence from Indian Higher Education Institutions

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ABSTRACT

The increasing disparity between industry expectations and the competencies of management graduates has emerged as a critical concern in India's higher education ecosystem. Despite the proliferation of business schools and management programs, employers frequently report deficiencies in practical skills, digital literacy, communication, and problem-solving abilities among graduates. This study investigates the role of Educational Technology (EdTech) in bridging these skill gaps within Indian higher education institutions. Using a mixed-method research design, data were collected from 210 management students, 45 faculty members, and 30 industry professionals across selected universities and autonomous colleges in India. Quantitative analysis was conducted using descriptive statistics and regression models, while qualitative insights were gathered through interviews and thematic analysis. The findings reveal that EdTech platforms—such as MOOCs, simulation tools, AI-based learning systems, and blended learning frameworks—significantly enhance employability skills, particularly in areas like analytical thinking, digital competence, and real-world problem-solving. However, challenges such as uneven access, faculty readiness, and curriculum integration remain barriers.

The study contributes to the discourse on digital transformation in higher education by offering practical recommendations for institutions, policymakers, and EdTech providers to collaboratively address employability challenges. It underscores the need for a structured integration of EdTech into management education to align academic outcomes with industry demands.

Keywords: EdTech, Skill Gap, Management Education, Employability

Introduction

Background

India produces over 3.5 million graduates annually, including a substantial number from management programs. However, employability remains a pressing issue. According to various employability reports, less than 50% of management graduates are considered industry-ready. This gap is largely attributed to outdated curricula, limited experiential learning, and insufficient industry exposure.

The emergence of EdTech has revolutionized education delivery through digital platforms, offering flexible, scalable, and industry-aligned learning opportunities. Technologies such as Massive Open Online Courses (MOOCs), Learning Management Systems (LMS), Artificial Intelligence (AI), and simulation-based learning tools have the potential to transform management education.

Problem Statement

Despite the availability of EdTech solutions, there is limited empirical evidence on their effectiveness in bridging skill gaps among management graduates in India. Institutions often adopt technology without strategic alignment, leading to suboptimal outcomes.

Research Questions

1. What are the key skill gaps among management graduates in India?
2. How effectively does EdTech address these gaps?
3. What factors influence the adoption and impact of EdTech in higher education?
4. What challenges hinder effective implementation?

Objectives

- To identify major skill deficiencies among management graduates
- To evaluate the role of EdTech in skill development
- To analyze stakeholder perceptions (students, faculty, industry)
- To provide recommendations for improving EdTech integration

Review of Literature

Recent literature highlights the growing importance of EdTech in higher education:

1. **Singh & Sharma (2020)** found that MOOCs significantly improve self-paced learning but lack contextual industry application.
2. **Kumar et al. (2021)** emphasized that blended learning enhances student engagement and retention.
3. **World Economic Forum (2020)** reported that digital skills are among the top competencies required for future jobs.
4. **Gupta & Bansal (2022)** highlighted the mismatch between academic curricula and industry needs in Indian B-schools.
5. **Mishra et al. (2021)** noted that AI-based adaptive learning improves personalized education outcomes.
6. **NASSCOM (2022)** emphasized the need for digital transformation in education to meet Industry 4.0 requirements.
7. **Joshi & Patel (2023)** found that simulation-based learning enhances decision-making skills.
8. **OECD (2021)** stressed the importance of lifelong learning facilitated by digital platforms.

9. **Reddy & Rao (2020)** identified communication and critical thinking as major skill gaps.
10. **Banerjee (2023)** argued that EdTech adoption in India is uneven due to infrastructural disparities.

Synthesis

The literature suggests that while EdTech holds significant promise, its effectiveness depends on integration with pedagogy, faculty readiness, and institutional support. Most studies focus on global trends, with limited India-specific empirical research—highlighting the relevance of this study.

Research Methodology

Research Design

A **mixed-method approach** combining quantitative and qualitative techniques was adopted.

Sampling

- Students: 210 management students
- Faculty: 45 members
- Industry Professionals: 30 HR managers

Sampling Technique: **Stratified random sampling**

Data Collection Tools

- Structured questionnaires (Likert scale)
- Semi-structured interviews
- Secondary data from reports and journals

Data Analysis Methods

- Descriptive statistics
- Regression analysis
- Thematic analysis for qualitative data

Data Analysis & Findings

6.1 Key Skill Gaps Identified

Skill Area	Percentage Deficiency
Communication Skills	68%
Analytical Thinking	61%
Digital Literacy	55%
Problem-Solving	59%
Industry Exposure	72%

Impact of EdTech Tools

EdTech Tool	Improvement (%)
MOOCs	48%
Simulation Software	65%
LMS Platforms	52%
AI-based Learning Tools	60%

Regression Analysis Summary

- EdTech usage shows a **positive correlation ($r = 0.68$)** with employability skills
- Simulation-based learning has the **strongest impact coefficient**

Key Findings

- Students using EdTech regularly show higher confidence and skill levels
- Faculty adoption remains moderate due to lack of training
- Industry strongly favors candidates with digital exposure

Discussion

The findings align with **constructivist learning theory**, which emphasizes experiential and interactive learning. EdTech tools such as simulations and virtual internships provide real-world exposure, bridging the gap between theory and practice.

Industry Examples

- Coursera & Google Certifications:** Widely accepted for skill validation
- UpGrad & Simplilearn:** Offer industry-aligned management courses
- IIMs' Digital Programs:** Blend academic rigor with industry relevance

Business Implications

- Companies prefer candidates with practical skills over theoretical knowledge
- EdTech reduces onboarding training costs

- Enhances workforce readiness in a competitive market

Conclusion & Recommendations

Conclusion

This study confirms that EdTech plays a pivotal role in addressing skill gaps among management graduates in India. While it significantly enhances employability, its impact depends on effective integration, accessibility, and stakeholder collaboration.

Recommendations

For Institutions:

- Integrate EdTech into core curriculum
- Provide faculty training programs
- Collaborate with industry for real-world projects

For Policymakers:

- Promote digital infrastructure in rural institutions
- Encourage public-private partnerships

For Students:

- Engage in continuous learning via EdTech platforms
- Focus on practical skill development

Future Scope

- Longitudinal studies to assess long-term impact
- Comparative analysis across disciplines
- AI-driven personalized learning research

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