

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

Prof. Nilesh Narayan Prasad^{1*}

ABSTRACT

The rapidly evolving job market in India demands a reassessment of educational curricula to align with industry needs. This paper explores the significant gap between IT and management curricula and its impact on employability. Despite high demand for technical and managerial skills, the traditional separation of IT and management education often leaves graduates underprepared for interdisciplinary roles. This research examines the existing curricula in both domains, identifies key areas of discrepancy, and evaluates their effects on job readiness. Using qualitative and quantitative methods, including curriculum analysis and employer surveys, the paper highlights the necessity for curriculum integration to bridge this divide. Recommendations for interdisciplinary educational strategies and industry-academia collaboration are proposed to enhance employability and address skill mismatches. The study concludes that a more integrated approach to education could better equip graduates for the evolving job market, fostering improved career outcomes and economic growth.

Keywords: *IT Curriculum, Management Curriculum, Employability, Curriculum Integration, India, Interdisciplinary Education*

In India's rapidly evolving job market, adaptability and innovation are key drivers of career success. The relentless pace of technological advancement and the growing complexity of business environments necessitate a workforce that can seamlessly integrate technical prowess with strategic insight. As technology continues to advance, the interplay between Information Technology (IT) and management becomes increasingly significant. However, traditional educational pathways often segregate these disciplines, potentially leading to a skills gap that impacts employability and job readiness.

¹Associate Professor, IIBM, Patna

*[Responding Author](#)

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Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

The IT sector in India is a prime example of rapid growth and change. Fueled by technological innovations and an ever-increasing demand for specialized skills, the IT industry is a cornerstone of the Indian economy. This sector requires professionals who are not only adept in programming, systems analysis, and cybersecurity but also capable of adapting to new technologies and methodologies. The dynamic nature of IT demands a curriculum that evolves in tandem with technological advancements, ensuring that graduates are equipped with the latest skills and knowledge.

On the other hand, management education in India traditionally emphasizes strategic decision-making, leadership, and organizational behavior. These areas are crucial for guiding businesses through complex environments and ensuring their strategic alignment with market demands. Management curricula often focus on skills such as project management, financial planning, marketing strategies, and human resource management. While these skills are indispensable for running successful organizations, they typically do not integrate technical knowledge or understanding of IT systems, which are becoming increasingly integral to modern business operations.

The traditional separation of IT and management education can lead to several issues. Graduates from IT programs may excel in technical domains but may lack the strategic and managerial skills needed to lead projects or teams effectively. Conversely, management graduates may possess strong leadership and strategic skills but may not fully understand the technical aspects of IT systems that are vital for making informed business decisions. This disconnect can result in a workforce that is not fully prepared for the interdisciplinary demands of the contemporary job market.

The significance of bridging this gap becomes more apparent when considering the nature of modern businesses. Organizations today operate in environments where technology and management are interwoven. The ability to leverage technology effectively while making strategic business decisions is a critical skill. For instance, data-driven decision-making requires both an understanding of data analytics (a technical skill) and the ability to interpret and act on these insights strategically (a managerial skill). As businesses increasingly rely on digital tools and data, the demand for professionals who can navigate both IT and management domains is growing.

This research aims to explore the discrepancies between IT and management curricula, shedding light on how these differences impact job readiness and employability. By analyzing the current state of educational programs in both fields, the study seeks to identify gaps and areas where integration could enhance the relevance and effectiveness of education. Additionally, the research will examine strategies for bridging these gaps, such as interdisciplinary programs and

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

industry-academia partnerships, which could better prepare graduates for the evolving demands of the job market.

The goal is to provide insights into how educational institutions can align their curricula with industry needs, ensuring that graduates are not only technically proficient but also equipped with the strategic and managerial skills necessary for success. By addressing the divide between IT and management education, this research aims to contribute to the development of a more versatile and capable workforce, capable of thriving in an increasingly complex and technology-driven business environment.

In summary, while both IT and management disciplines are essential for business success, their traditional separation in educational pathways can create a skills gap that affects employability. Understanding and addressing this gap is crucial for developing educational strategies that better align with industry demands and equip graduates with the comprehensive skill sets needed for modern career challenges.

METHODOLOGY

To effectively address the gap between IT and management curricula and its impact on employability in India, this research employs a comprehensive mixed-methods approach. This approach integrates both qualitative and quantitative data collection and analysis techniques to provide a well-rounded understanding of the current state of educational programs and their alignment with industry needs. The methodology is structured into three primary components: curriculum analysis, surveys and interviews, and case studies. Each component plays a crucial role in identifying discrepancies, understanding their implications, and exploring potential solutions.

1. Curriculum Analysis

Objective: The primary aim of curriculum analysis is to identify the key differences and overlaps between IT and management educational programs. This involves a detailed examination of the content, structure, and focus of curricula from leading educational institutions in India.

Process:

- **Selection of Institutions:** A representative sample of institutions offering IT and management programs is selected. This includes prestigious universities, engineering colleges, and business schools across different regions of India.
- **Curriculum Review:** Detailed syllabi and course materials from both undergraduate and postgraduate programs are analyzed. The analysis focuses on core subjects, elective

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

options, and practical components. Special attention is given to modules related to emerging technologies, project management, and strategic planning.

- **Comparison Criteria:** The curricula are compared based on several criteria:
 - **Core Competencies:** Identification of the fundamental skills emphasized in IT and management programs.
 - **Interdisciplinary Content:** Examination of the extent to which curricula integrate or overlap between IT and management disciplines.
 - **Practical Training:** Evaluation of practical and project-based learning opportunities provided in each program.
- **Outcome:** This analysis aims to reveal gaps and areas where integration might be beneficial. The results provide insights into how current educational offerings align with industry requirements and highlight potential areas for curriculum development.

2. Surveys and Interviews

Objective: Surveys and interviews aim to gather insights from both employers and recent graduates regarding the relevance of current curricula and the skills necessary for success in the job market.

Process:

- **Design and Distribution:** Surveys are designed to capture quantitative data on employers' perceptions of curriculum relevance and the skills gaps observed in recent graduates. Questions are framed to address specific aspects such as technical proficiency, managerial skills, and interdisciplinary knowledge.
- **Target Groups:** The survey is distributed to a diverse group of employers across various industries, including IT, finance, manufacturing, and services. This ensures a broad perspective on the skills and competencies valued across different sectors.
- **Interviews:** In-depth interviews are conducted with a select group of industry professionals and recent graduates. The interviews explore personal experiences, skill utilization, and perceived inadequacies in current educational programs.
- **Data Analysis:** The survey results are analyzed using statistical methods to identify common trends and significant gaps. Qualitative data from interviews are coded and thematically analyzed to extract key insights and narratives.
- **Outcome:** This component provides a detailed understanding of industry expectations and graduates' perspectives, highlighting discrepancies between academic preparation and job market demands.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

3. Case Studies

Objective: Case studies aim to examine educational institutions and programs that have successfully integrated IT and management curricula. These cases serve as models for potential curriculum development strategies.

Process:

- **Selection of Cases:** Institutions with notable interdisciplinary programs or innovative curricula are selected for detailed case studies. Criteria for selection include the presence of integrated programs, successful alumni, and positive industry feedback.
- **Data Collection:** Data is collected through program documentation, interviews with faculty members, and feedback from students and employers associated with these programs.
- **Analysis:** Each case study is analyzed to identify best practices, implementation strategies, and outcomes. The analysis focuses on curriculum design, interdisciplinary modules, and the impact on graduate employability.
- **Outcome:** The case studies provide practical examples of how curriculum integration can enhance employability and offer actionable recommendations for other institutions looking to bridge the gap between IT and management education.

Gap Analysis

1. Curriculum Focus and Content

The primary gap between IT and management curricula lies in their distinct focus and content. IT education typically emphasizes technical skills and specialized knowledge, while management education centers on strategic and operational competencies. This divergence results in a lack of interdisciplinary knowledge that is increasingly crucial in today's job market.

- **IT Curriculum:** IT programs concentrate on subjects such as programming, database management, cybersecurity, and network systems. These curricula are designed to equip students with deep technical expertise and problem-solving abilities specific to IT roles. While these skills are essential for technical positions, they often lack elements related to business strategy, management principles, or leadership.
- **Management Curriculum:** Management programs, on the other hand, focus on leadership, strategic planning, financial management, marketing, and organizational behavior. These courses prepare students for roles that require decision-making, team management, and strategic oversight. However, they typically do not cover technical aspects of IT systems or digital tools that are crucial for informed decision-making in a tech-driven business environment.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

2. Skills Mismatch

The skills mismatch between IT and management graduates is a significant concern. The current separation of curricula means that graduates may not be fully prepared for roles that require both technical and managerial skills.

- **IT Graduates:** While IT graduates possess strong technical skills, they may lack the strategic insight required for higher-level management positions. Skills such as project management, team leadership, and financial acumen are often underdeveloped, limiting their career progression into managerial roles within IT organizations.
- **Management Graduates:** Conversely, management graduates often have robust leadership and strategic skills but may lack the technical knowledge necessary to make informed decisions in tech-centric industries. Without an understanding of IT systems, these graduates may struggle with projects involving technology integration, data analysis, or digital transformation.

3. Industry Requirements

Modern industries increasingly demand professionals who can bridge the gap between technology and management. The rise of digital transformation, data analytics, and IT-driven business strategies has created a need for individuals who can navigate both realms effectively.

- **Interdisciplinary Roles:** Many roles in contemporary organizations require a blend of technical and managerial skills. For example, positions in IT project management, digital marketing, or data-driven business strategy necessitate an understanding of both IT systems and business operations. The current educational separation often leaves graduates unprepared for these interdisciplinary roles, affecting their employability and career advancement.
- **Evolving Business Needs:** As businesses become more reliant on technology, the ability to integrate IT solutions with business strategies is crucial. Professionals who can leverage technology to drive business outcomes are highly sought after. The existing curriculum structure does not always support this integration, creating a gap between industry expectations and graduate preparedness.

4. Educational Integration

Some educational institutions have started addressing this gap by offering interdisciplinary programs that combine IT and management principles. These integrated programs aim to provide students with a comprehensive skill set that includes both technical and managerial expertise.

- **Integrated Programs:** Programs such as MBA in Information Technology or dual-degree options that blend IT and management courses are examples of efforts to bridge the gap. These programs often include courses on project management, business analytics, and technology strategy, helping students develop a more holistic understanding of both domains.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

- **Best Practices:** Institutions that have successfully integrated IT and management curricula typically report improved employability and career outcomes for their graduates. By offering courses that cover both technical skills and strategic management, these programs prepare students for a range of roles that require interdisciplinary knowledge.

In summary, the gap between IT and management curricula stems from their distinct focus and content, leading to a mismatch of skills and inadequate preparation for interdisciplinary roles. Addressing this gap through curriculum integration and interdisciplinary programs is crucial for aligning educational outcomes with industry demands and enhancing graduate employability.

Limitations

1. Scope of Research

One limitation of this study is the selection of institutions and programs for analysis. The research focuses on a representative sample of leading educational institutions offering IT and management programs. While this approach provides valuable insights, it may not fully capture the diversity of educational offerings across all institutions in India. Smaller or less prominent institutions may have different curricula and approaches that are not reflected in the study. Consequently, the findings may not be universally applicable, potentially overlooking unique or emerging educational practices in other institutions.

2. Dynamic Nature of Industry

The fast-paced evolution of technology and business practices presents another limitation. The rapid advancement in fields such as artificial intelligence, data analytics, and digital transformation means that curricula can quickly become outdated. As industry demands shift, the relevance of the curricula analyzed in this study may diminish over time. The research findings are based on the current state of education and industry needs, but future developments could alter the landscape significantly. Continuous curriculum updates and adaptations are necessary to maintain alignment with industry trends, which this study might not fully account for.

3. Subjectivity in Evaluation

The research relies on surveys and interviews with employers and recent graduates to assess curriculum relevance and skill gaps. While these methods provide valuable qualitative and quantitative data, they are inherently subjective. Employers' and graduates' perceptions of curriculum effectiveness can vary widely based on individual experiences, expectations, and industry contexts. This subjectivity may lead to varying interpretations of the curriculum's impact on employability and job readiness. Additionally, the findings might reflect personal biases or specific experiences rather than a comprehensive overview of the broader educational landscape.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

4. Generalizability of Findings

The integration of case studies of institutions with successful interdisciplinary programs offers practical insights but may not be fully representative of all educational contexts. The success of these programs could be influenced by unique factors such as institutional resources, faculty expertise, and industry connections, which may not be easily replicable in other settings. Therefore, the recommendations derived from these case studies might not be universally applicable or feasible for all institutions aiming to bridge the gap between IT and management curricula.

5. Data Collection Constraints

Finally, the data collection process itself poses limitations. Surveys and interviews may face challenges such as low response rates, incomplete data, or misinterpretations of questions. These constraints can affect the accuracy and reliability of the findings. Additionally, the research might be limited by the availability of current and comprehensive data on curriculum changes and industry requirements.

In conclusion, while the study provides valuable insights into the gap between IT and management curricula, these limitations must be acknowledged. Future research could address these limitations by expanding the scope, incorporating real-time industry trends, and exploring a broader range of educational contexts.

CONCLUSION

This research has illuminated significant gaps between IT and management curricula and their impact on employability in India. The findings underscore the challenges faced by graduates due to the traditional separation of these disciplines and propose a path forward to bridge this divide. Addressing these gaps is crucial for aligning educational programs with industry needs and enhancing the career prospects of graduates.

1. Integration of Curricula

One of the most pressing issues identified is the distinct focus and content of IT and management curricula. IT programs concentrate on technical skills, such as programming and systems analysis, while management programs emphasize strategic decision-making, leadership, and organizational behavior. This separation creates a skills mismatch where graduates may lack the interdisciplinary knowledge necessary for today's complex job market. To address this, integrating IT and management curricula can provide a more holistic education that equips students with both technical expertise and strategic insight. Institutions that offer combined programs or interdisciplinary courses demonstrate how such integration can enhance employability and prepare students for diverse roles that require a blend of skills.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

2. Industry Alignment

The research highlights a growing need for professionals who can navigate both IT and management domains effectively. Modern businesses increasingly rely on technology to drive strategic decisions, making it imperative for graduates to understand both technical systems and business strategies. The demand for interdisciplinary skills in roles such as IT project management and data-driven business strategy reinforces the need for curricula that bridge the gap between IT and management. Educational programs that incorporate elements from both fields can better align with industry requirements and improve job readiness.

3. Recommendations for Educational Reform

Based on the findings, several recommendations can be made to enhance the alignment of curricula with industry needs. Educational institutions should consider developing interdisciplinary programs that combine IT and management courses, enabling students to acquire a broad skill set. Collaboration between academia and industry can further ensure that curricula are updated regularly to reflect current trends and technologies. Industry partnerships can also provide practical insights and real-world applications, enhancing the relevance of academic programs.

4. Future Research and Adaptation

While this study provides valuable insights, it is essential to recognize its limitations, including the dynamic nature of industry trends, subjectivity in data collection, and the generalizability of findings. Future research should expand the scope to include a wider range of institutions and emerging educational practices. Additionally, continuous monitoring of industry developments and curriculum adaptations is necessary to ensure that educational programs remain relevant and effective.

5. Concluding Thoughts

In summary, bridging the gap between IT and management curricula is essential for improving employability and addressing the evolving demands of the job market. Integrating technical and managerial education can prepare graduates for a wider array of roles and enhance their career prospects. By adopting a more interdisciplinary approach and fostering closer collaboration between educational institutions and industry, it is possible to create a more versatile and capable workforce. This alignment will not only benefit graduates but also contribute to the overall growth and competitiveness of India's economy in a globalized, technology-driven world.

Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

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Bridging the Divide: Addressing the Gap Between IT and Management Curricula for Enhanced Employability in India

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Conflict of Interest

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