

## Original Article

# Effectiveness of Distance Education in Management Institutes: An Empirical Study of Maharashtra

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## Abstract

Distance education has emerged as an important mode of higher education delivery, particularly in management education, owing to rapid digitization, increased internet penetration, and the demand for flexible learning opportunities. The implementation of the National Education Policy (NEP) 2020 and the integration of digital technologies have further accelerated the adoption of online and distance learning programmes across India. This study examines the effectiveness of distance education in management institutes in Maharashtra by evaluating students' perceptions regarding teaching quality, technological infrastructure, faculty support, learning resources, assessment practices, student engagement, and employability outcomes. The study employs a quantitative research design using a structured questionnaire administered to MBA students enrolled in distance and online management programmes. The study offers practical recommendations for management institutions, policymakers, and faculty members to improve the quality of distance management education and enhance graduate employability.

**Keywords:** Distance Education, Online Learning, Learning Effectiveness, Student Satisfaction, Employability, Digital Learning, Higher Education.

## Introduction

Higher education has undergone significant transformation during the past decade due to technological innovations and changing learner expectations. Distance education, which was once considered an alternative mode of education, has now become an integral component of mainstream higher education. The widespread availability of digital learning platforms, Learning Management Systems (LMS), virtual classrooms, cloud computing, and Artificial Intelligence (AI)-enabled educational tools has significantly enhanced the accessibility and flexibility of management education. Management education in India has experienced substantial growth through online and distance learning programmes offered by universities and autonomous institutions. Working professionals, entrepreneurs, and students from rural and semi-urban regions increasingly prefer distance MBA programmes due to their flexibility, affordability, and career advancement opportunities. Despite these advantages, several concerns remain regarding instructional quality, student engagement, academic support, assessment practices, digital infrastructure, and employer acceptance. The effectiveness of distance education therefore depends not only on technological availability but also on faculty competency, learner motivation, institutional support, and curriculum quality.

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Maharashtra is one of India's leading educational states with numerous universities and management institutes offering distance and online MBA programmes. However, empirical studies evaluating the effectiveness of these programmes remain limited. This study seeks to address this research gap.

#### Objectives of the Study

1. To evaluate the effectiveness of distance education in management institutes in Maharashtra.
2. To examine the impact of faculty support on student learning effectiveness.
3. To assess the influence of digital learning infrastructure on academic performance.
4. To study the relationship between student engagement and learning outcomes.
5. To evaluate student satisfaction with distance management education.
6. To examine the impact of distance education on employability skills.

#### Literature Review:

Previous research indicates that technology-enabled education has transformed teaching and learning in higher education. Moore (2013) highlighted that learner interaction, communication, and institutional support are critical determinants of successful distance education. Anderson (2008) emphasized that online learning environments provide flexibility and improved accessibility when supported by effective instructional design. Garrison and Vaughan (2008) proposed the Community of Inquiry framework, demonstrating that cognitive presence, social presence, and teaching presence significantly enhance learning outcomes in online education.

#### Statistical Tools

- **Correlation Analysis:**

| Variables               | Academic Performance |
|-------------------------|----------------------|
| Faculty Support         | 0.71**               |
| LMS Effectiveness       | 0.68**               |
| Student Engagement      | 0.74**               |
| Online Teaching Quality | 0.69**               |

$p < 0.01$

#### Interpretation

All independent variables are positively and significantly correlated with academic performance.

Martin and Bolliger (2018) found that regular faculty interaction and collaborative learning activities substantially improve student engagement in online courses. Dhawan (2020) reported that digital education became indispensable during the COVID-19 period and recommended strengthening technological infrastructure and faculty training for sustainable online education. Kumar and Sharma (2022) observed that management students' satisfaction with online education is strongly influenced by LMS quality, faculty responsiveness, and assessment transparency. Recent studies also indicate that employability skills such as communication, analytical thinking, teamwork, digital literacy, and problem-solving can be effectively developed through well-designed online management programmes. Although previous studies have explored online learning effectiveness, relatively few empirical investigations have focused specifically on management institutes in Maharashtra, thereby justifying the present study.

#### Research Methodology

**Research Design:** The study adopts a descriptive and quantitative research design.

**Population:** MBA students enrolled in distance and online management programmes in Maharashtra.

**Sample Size:** 420 MBA students.

**Sampling Technique:** Stratified Random Sampling.

**Data Collection:**

**Primary Data:** Structured questionnaire using a five-point Likert scale.

**Secondary Data:** Research journals, Books, AICTE publications, UGC reports, NEP 2020 documents, Government reports

Student engagement shows the strongest correlation.

- **Multiple Regression Analysis**

### Dependent Variable: Distance Education Effectiveness

| Predictor          | Beta | t-value | p-value |
|--------------------|------|---------|---------|
| Faculty Support    | 0.31 | 7.82    | 0.000   |
| LMS Effectiveness  | 0.28 | 6.91    | 0.000   |
| Student Engagement | 0.34 | 8.53    | 0.000   |
| Online Teaching    | 0.22 | 5.88    | 0.000   |

### Model Summary

R = 0.81

R<sup>2</sup> = 0.66

Adjusted R<sup>2</sup> = 0.65

F = 198.64

p = 0.000

### ● ANOVA

### Variable: Student Satisfaction based on Age Groups

| Source         | F    | Sig.  |
|----------------|------|-------|
| Between Groups | 5.82 | 0.003 |
| Within Groups  |      |       |

### Interpretation

Student satisfaction differs significantly across age groups. Working professionals generally reported higher satisfaction.

### Results and Findings

The analysis indicates that students generally perceive distance management education positively. Faculty support received the highest satisfaction scores, reflecting the importance of timely guidance and academic mentoring. Students reported that effective online teaching methods, interactive virtual classrooms, and easy access to learning resources significantly improved their learning experience.

Correlation analysis revealed positive relationships among faculty support, online teaching quality, student engagement, and learning effectiveness. Multiple regression analysis suggested that faculty support, LMS effectiveness, and student engagement significantly predicted the effectiveness of distance education, while technology accessibility also contributed positively.

Students appreciated the flexibility of distance education, particularly those balancing employment and academic commitments. However, respondents highlighted challenges such as inconsistent internet connectivity in rural areas, reduced peer interaction, limited networking opportunities, and concerns regarding practical exposure.

### Major Findings

- Distance education provides flexibility for working professionals and geographically dispersed learners.
- Faculty support significantly enhances student satisfaction and learning outcomes.

### Interpretation

The model explains 66% of the variation in the effectiveness of distance education. Student engagement is the strongest predictor.

- Learning Management Systems play a critical role in academic success.
- Student engagement positively influences academic performance.
- Digital infrastructure significantly affects learning effectiveness.
- Continuous assessment improves student participation.
- Distance education enhances digital literacy and employability skills.
- Students perceive online MBA programmes as suitable for career advancement.
- Rural students continue to face technological accessibility challenges.
- Institutional support is essential for improving learning quality.

### Conclusion

Distance education has become a significant contributor to management education in India, providing flexible, accessible, and technology-enabled learning opportunities. The study demonstrates that the effectiveness of distance education depends on multiple institutional and learner-related factors, including faculty support, online teaching quality, technological infrastructure, and student engagement.

Management institutes should focus on enhancing digital learning ecosystems, strengthening faculty capabilities, and integrating innovative teaching practices to improve student outcomes. The adoption of AI-assisted learning tools, interactive pedagogies, and industry-oriented curriculum can further increase the quality and relevance of distance MBA programmes.

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### Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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