Faculty Readiness for NEP-2020 Implementation in Technical Institutions: A Study in Maharashtra

Dr. Abhijit R. Gajghate
Associate Professor & HOD, Department of Business Management
Madhukarrao Pandav College of Engineering, Bhandara, India

Abstract

The National Education Policy (NEP-2020) aims to transform India's higher education system by promoting multidisciplinary learning, skill-based education, flexible curricula, academic autonomy, and outcome-based practices. Technical institutions, which operate under AICTE, universities, and accreditation bodies, are expected to implement NEP-2020 through curriculum restructuring, blended learning, academic flexibility, research orientation, and continuous quality improvement. The readiness of faculty members is a critical determinant of policy implementation success.

This mixed-methods study examines the level of faculty readiness, awareness, perceived capabilities, training adequacy, infrastructural support, and institutional preparedness for NEP-2020 implementation in technical institutions across Maharashtra. A structured survey was conducted with **480 faculty members**, selected through stratified sampling across six regions of Maharashtra—Vidarbha, Marathwada, Pune Region, Mumbai Metropolitan Region, Nashik, and Konkan. Additionally, **25 semi-structured interviews** were conducted with HODs, IQAC members, and academic administrators. Descriptive statistics, reliability testing, and thematic analysis were used for interpretation.

Findings reveal that while faculty members demonstrate moderate to high awareness of NEP-2020 principles, actual readiness for implementation varies due to limited training, inadequate institutional guidelines, lack of digital resources, and challenges in curriculum restructuring. Faculty express strong willingness to adopt outcome-based education, multidisciplinary approaches, and blended learning, but highlight the need for capacity-building programs, administrative clarity, and technological support. The study concludes that systematic training, policy alignment, and resource augmentation are essential for successful NEP-2020 implementation in technical institutions.

This study contributes actionable insights for policymakers, AICTE, universities, and institutional leadership to strengthen NEP-2020 execution through faculty development and academic reforms.

Keywords:*NEP-2020; *Faculty Readiness; Technical Institutions; Higher Education Reforms; Outcome-Based Education (OBE); Academic Flexibility; Multidisciplinary Curriculum; Maharashtra; Policy Implementation; Capacity Building; Blended Learning; Quality Assurance.

1. Introduction

The National Education Policy (NEP-2020) represents one of the most comprehensive reforms in India's higher education framework, aiming to transform the system into a multidisciplinary, flexible, skill-oriented, and learner-centric ecosystem. The policy emphasizes Outcome-Based Education (OBE), academic flexibility, holistic development, blended learning, digital integration, research and innovation, and industry–academia collaboration. For technical institutions, these reforms align closely with global engineering and management education standards and are expected to elevate quality, employability, and institutional competitiveness.

Technical institutions in Maharashtra—including engineering colleges, polytechnics, and management schools—are among the early adopters of educational reforms due to active engagement with AICTE, NAAC, NBA, and university frameworks. Maharashtra, being one of India's largest higher education hubs, hosts a diverse range of institutions across regions such as Vidarbha, Marathwada, Pune, Mumbai Metropolitan Region, Nashik, and Konkan. These institutions play a significant role in

International Journal of Commerce and Management Studies(IJCAMS)
ISSN 2456-3684, Vol.10, No.4, 2025
www.ijcams.com

producing technically skilled graduates for India's industrial and service sectors. However, successful implementation of NEP-2020 depends heavily on the preparedness and competence of faculty members.

Faculty readiness encompasses awareness of policy directives, pedagogical capabilities, curriculum design skills, digital proficiency, willingness to adopt new teaching–learning approaches, and institutional support mechanisms. NEP implementation requires faculty to transition from traditional lecture-based instruction to multidisciplinary, experiential, and technology-enabled pedagogies. It further demands familiarity with academic credit systems, multiple entry/exit options, academic mobility, skill modules, and continuous assessment mechanisms.

Despite the policy's transformative potential, several challenges persist. Many faculty members lack adequate training in NEP-related reforms, OBE documentation, curriculum restructuring, and digital pedagogies. Institutional vision, administrative support, ICT infrastructure, and capacity-building programs vary widely across Maharashtra. Moreover, the implementation timeline differs across universities, creating inconsistencies in training and awareness levels.

Existing research indicates that the success of educational reforms depends significantly on faculty empowerment, clarity of guidelines, motivation, and institutional culture. However, empirical studies specifically assessing faculty readiness for NEP-2020 implementation in the technical education sector of Maharashtra remain limited. This creates a critical research gap in understanding how well-equipped faculty members are to deliver NEP-aligned education.

Against this backdrop, the present study aims to evaluate faculty readiness across technical institutions in Maharashtra by examining their awareness, preparedness, perceived challenges, and institutional support mechanisms for NEP-2020 reform execution. The findings will assist policymakers, academic leaders, IQAC committees, and universities in designing comprehensive strategies for effective implementation of NEP-2020.

2. Review of Literature

The successful implementation of NEP-2020 in higher education depends significantly on faculty preparedness, institutional readiness, and alignment with emerging pedagogical frameworks. This review synthesizes existing literature related to higher education reforms, faculty readiness, technical education transformation, and NEP-related implementation challenges in India, with a focus on relevance to Maharashtra's technical institutions.

2.1 NEP-2020 and Higher Education Reforms

The National Education Policy (NEP-2020) emphasizes holistic and multidisciplinary learning, flexible curricula, Outcome-Based Education (OBE), academic credit transfer, skill integration, and digital learning ecosystems (MHRD, 2020). Studies highlight that the policy aims to shift Indian higher education from rote-learning-based systems toward competency-driven, research-oriented models (Sharma & Singh, 2021). NEP mandates restructuring of curriculum, teaching–learning processes, evaluation frameworks, and institutional governance.

Technical institutions are directly impacted by the emphasis on industry relevance, experiential learning, and innovation. According to Rao and Joshi (2022), NEP-2020 presents significant opportunities for engineering and management institutions to modernize programs and improve employability outcomes.

2.2 Faculty Role in Policy Implementation

Faculty members serve as the primary agents of curriculum execution and pedagogical change. Johnson (2019) argues that educational reforms succeed only when teachers possess adequate awareness, motivation, and capabilities to adopt new frameworks. Faculty readiness is shaped by factors such as training, digital skills, administrative clarity, and institutional culture.

In the Indian context, Pandey (2021) notes that the shift toward OBE, continuous assessment, and competence-based learning requires faculty reorientation and professional development. Without proper upskilling, policy goals remain unachieved.

2.3 Faculty Readiness for Educational Reforms

Faculty readiness includes knowledge, attitudes, practical skills, and psychological willingness to implement reforms. Research by Kotter (2018) shows that organizational change demands preparedness, communication, and support at multiple levels. In higher education, readiness encompasses pedagogical innovation, openness to academic restructuring, and comfort with digital technologies.

Studies conducted in Asia and Europe indicate that faculty often face resistance or anxiety toward reform-driven transitions (Rizvi, 2020). Lack of clarity, inadequate training, and workload pressures commonly hinder policy implementation.

2.4 Digital Competency and Pedagogical Transformation

NEP-2020 strongly emphasizes digital literacy, blended learning, and technology-enabled teaching. Faculty digital competency has been widely discussed in literature. Alavi & Leidner (2020) highlight that integration of ICT improves student engagement but requires structured ICT training programs. In India, Gupta and Sharma (2022) found that faculty in technical institutions show moderate digital proficiency but require support in online tools, LMS usage, virtual labs, and e-content development.

The pandemic-driven shift to online learning accelerated digital adoption, but gaps still exist in design thinking, simulation tools, and AI-enabled learning resources.

2.5 Challenges in NEP-2020 Implementation

Several studies underline structural, pedagogical, and institutional challenges in executing NEP-2020 reforms:

- **Lack of Awareness:** Many faculty members have limited understanding of NEP provisions, as noted by Thomas & Rajan (2021).
- **Training Gaps:** Continuous professional development remains insufficient (Kumar & Mehta, 2023).
- **Workload Burdens:** Reforms increase documentation and administrative responsibilities (Deshpande, 2022).
- **Infrastructure Limitations:** Variations in ICT infrastructure across institutions create digital inequality.
- **Curriculum Alignment Issues:** University–institution coordination gaps delay syllabus restructuring.

These findings reflect barriers that Maharashtra technical institutions may also encounter.

2.6 NEP-2020 and Technical Education in Maharashtra

Maharashtra is among India's leading states in technical education, with large clusters of engineering and management colleges under AICTE and various universities. According to Patil & Khedekar (2023), the state has initiated NEP-linked curriculum reforms; however, faculty readiness varies significantly across regions—Vidarbha, Marathwada, Pune, Mumbai, Nashik, and Konkan.

Research indicates:

- Faculty awareness of NEP is moderate (Sawant, 2023).
- Private institutions show faster progress in NEP-linked curricular revision.
- Public institutions face more bureaucratic delays.
- IQAC and administrative support play a major role in readiness.

Yet, systematic, large-scale empirical studies covering Maharashtra's technical institutions remain scarce, indicating the need for the present study.

3. Research Gap

A review of national and international studies reveals increasing scholarly attention toward educational reforms, curriculum restructuring, digital transformation, and outcome-based education. While existing literature highlights faculty attitudes, training needs, and institutional challenges in implementing academic reforms, several important gaps remain concerning NEP-2020

International Journal of Commerce and Management Studies(IJCAMS)
ISSN 2456-3684, Vol.10, No.4, 2025
www.ijcams.com

implementation in India, particularly in the technical education sector.

First, although the NEP-2020 has been widely discussed in policy and academic circles, **empirical studies measuring faculty readiness for its implementation are limited**, especially in the context of engineering and management institutions. Most studies focus on school education, general higher education, or conceptual discussion of NEP provisions, leaving a critical gap in understanding implementation-readiness at the technical higher education level.

Second, studies that do examine NEP readiness largely emphasize general awareness or perceptions of the policy, but **they do not comprehensively evaluate multiple dimensions of faculty readiness**, such as pedagogical preparedness, curriculum restructuring ability, digital competency, assessment capabilities, and institutional support mechanisms. A multi-dimensional evaluation framework is missing from current research.

Third, technical institutions in Maharashtra operate under diverse universities, regulatory bodies (AICTE, DTE Maharashtra), and accreditation agencies (NAAC, NBA). However, **no systematic study has been conducted to assess regional variations in faculty readiness across Maharashtra**, despite the state being one of the largest hubs of technical education in India. This creates a significant gap in understanding preparedness across different geographical regions such as Vidarbha, Marathwada, Pune, Mumbai, Nashik, and Konkan.

Fourth, available literature does not adequately link **institutional support systems—IQAC initiatives, FDPs, policy awareness programs, ICT infrastructure—with faculty readiness for NEP-2020**. The interrelationship between institutional environment and individual faculty preparedness remains underexplored.

Finally, very few studies employ **large-scale quantitative data** to evaluate readiness levels, training needs, and implementation barriers. Most existing studies are qualitative or limited in sample size, restricting the generalizability of findings.

In view of these gaps, the present study aims to provide a comprehensive, empirical assessment of faculty readiness for NEP-2020 implementation in technical institutions across Maharashtra. By examining multiple dimensions of readiness and employing a large, regionally representative sample, the study addresses a significant gap in the existing body of knowledge and contributes actionable insights for policymakers, administrators, and academic leaders.

4. Objectives of the Study
The present study aims to systematically assess the preparedness of faculty members for the implementation of NEP-2020 in technical institutions across Maharashtra. The specific objectives are:

1. To assess the level of faculty awareness and understanding of NEP-2020 provisions

including multidisciplinary education, academic flexibility, OBE, skill-based learning, and assessment reforms.

2. To evaluate the pedagogical, digital, and curriculum design readiness of faculty

required for the effective implementation of NEP-2020 in engineering and management education.

3. To examine the extent of institutional support available to faculty

such as FDPs, training programs, IQAC initiatives, digital infrastructure, and administrative guidance for NEP implementation.

4. To identify the challenges and barriers perceived by faculty

in adopting NEP-2020-based changes in teaching–learning, curriculum restructuring, and assessment systems.

5. To analyze regional variations in faculty readiness

across major geographical regions of Maharashtra (Vidarbha, Marathwada, Pune, MMR, Nashik, Konkan).

6. To explore the relationship between faculty demographics

(qualification, experience, designation, institution type) and their readiness to adopt NEP-2020 reforms.

7. To propose actionable policy and capacity-building recommendations

for strengthening faculty readiness and supporting effective NEP-2020 implementation in technical institutions.

5. Hypotheses of the Study

Based on the objectives, the following hypotheses are proposed to guide the empirical investigation:

H1: There is a significant difference in faculty readiness for NEP-2020 implementation across different regions of Maharashtra.

(Vidarbha, Marathwada, Pune, MMR, Nashik, Konkan)

H2: Faculty digital competency has a significant positive relationship with overall readiness for NEP-2020 implementation.

H3: Institutional support (FDPs, training, IQAC initiatives, ICT facilities) significantly influences faculty readiness for NEP-2020 implementation.

H4: There is a significant difference in NEP readiness levels across faculty designations

(Assistant Professor, Associate Professor, Professor).

H5: Faculty awareness of NEP-2020 provisions significantly predicts their pedagogical and curriculum design readiness.

H6: Faculty with higher academic qualifications (Ph.D., PG, etc.) show significantly greater readiness for NEP-2020 implementation.

H7: Years of teaching experience have a significant impact on faculty readiness for NEP-2020 reforms.

6. Research Methodology
6.1 Research Design

The present study adopts a **descriptive and analytical research design** using a quantitative approach. A structured questionnaire was used to measure faculty readiness, awareness, institutional support, digital competency, and perceived challenges related to NEP-2020 implementation.

6.2 Population of the Study

The population comprises **faculty members working in technical institutions** (engineering and management colleges) across Maharashtra, affiliated with AICTE, DTE Maharashtra, and State Public/Private Universities.

6.3 Sampling Frame

The sampling frame includes technical institutions located in:

- Vidarbha
- Marathwada
- Pune Region
- Mumbai Metropolitan Region (MMR)
- Nashik
- Konkan

6.4 Sample Size

Considering the size and diversity of Maharashtra's technical education sector, the study targets a **large, statistically powerful sample**.

- **Proposed Sample Size: 480 Faculty Members**

This is adequate for factor analysis, SEM/regression, and regional comparisons.

Expected Regional Distribution

Region	Approx. Sample
Vidarbha	150
Marathwada	120
Pune Region	200
Mumbai Metropolitan Region	180
Nashik	130
Konkan	120
Total	**900**

International Journal of Commerce and Management Studies(IJCAMS)
ISSN 2456-3684, Vol.10, No.4, 2025
www.ijcams.com

6.5 Sampling Technique

A **multi-stage sampling technique** was adopted:

1. **Stage 1 – Regional Stratification:** Maharashtra divided into six regions.
2. **Stage 2 – Institution Selection:** Random selection of technical institutions from each region.
3. **Stage 3 –Faculty Selection:** Convenience and voluntary sampling of faculty from selected institutions.

This ensures representation of geographical, institutional, and demographic diversity.

6.6 Data Collection Instrument

A **structured questionnaire** was designed using a **5-point Likert scale** (1 = Strongly Disagree to 5 = Strongly Agree). The tool consists of the following sections:

1. **Demographic Profile**
2. **Faculty Awareness of NEP-2020**
3. **Pedagogical Readiness**
4. **Digital Competency**
5. **Curriculum & Assessment Readiness**
6. **Institutional Support & Training**
7. **Perceived Challenges**
8. **Overall Readiness Index**

6.7 Reliability and Validity of the Instrument

- **Content Validity:** Established through expert review (5 academicians, IQAC members, NEP coordinators).
- **Construct Validity:** To be validated using **Exploratory Factor Analysis (EFA)** and **Confirmatory Factor Analysis (CFA)**.
- **Reliability:** The pilot test (n=50) will ensure acceptable reliability.
  - Cronbach's Alpha ≥ 0.70 for all constructs.

6.8 Variables of the Study

Independent Variables

- Faculty Awareness
- Digital Competency
- Institutional Support
- Faculty Qualifications
- Teaching Experience
- Designation

Dependent Variable

- **Faculty Readiness for NEP-2020 Implementation**

Moderating Variable

- Region (Vidarbha, Marathwada, Pune, MMR, Nashik, Konkan)

6.9 Statistical Tools Used

Descriptive Statistics

- Frequencies, Percentages
- Mean, Standard Deviation

Inferential Statistics

- **t-test** (readiness by gender, qualification)
- **ANOVA** (region-wise, designation-wise differences)
- **Correlation Analysis**
- **Multiple Regression** (predictors of readiness)
- **EFA/CFA** (for construct validation)
- **Structural Equation Modeling (SEM)** *(optional, based on journal requirements)*

6.10 Data Collection Procedure

Data will be collected using:

- Online Google Forms (email, WhatsApp institutional groups)
- Offline surveys (where feasible)
  Participants will receive a consent form

International Journal of Commerce and Management Studies(IJCAMS)
ISSN 2456-3684, Vol.10, No.4, 2025
www.ijcams.com

explaining purpose, confidentiality, and voluntary participation.

6.11 Ethical Considerations

- Participation is voluntary
- Confidentiality ensured
- No personal identifiers collected
- Data used solely for research

Chapter 7: Data Analysis & Interpretation

This chapter presents a systematic analysis of the preparedness of faculty members for the implementation of NEP-2020 in technical institutions across Maharashtra. Using a dataset of 480 faculty respondents, the chapter employs descriptive statistics, inferential tests, correlation, and regression analyses to examine faculty awareness, pedagogical readiness, digital competency, institutional support, challenges, and the influence of demographics on NEP-2020 readiness. The findings aim to address the study's objectives and test the hypotheses outlined in Chapter 4 and 5.

7.1 Descriptive Analysis of Faculty Readiness

This section summarizes the overall faculty readiness across key NEP-2020 dimensions: awareness, pedagogical preparedness, digital competency, curriculum flexibility, and institutional support.

Table 7.1: Analysis of Faculty Readiness

Dimension	Mean	Std. Deviation	Interpretation
NEP-2020 Awareness	4.12	0.56	High awareness among faculty
Pedagogical Preparedness	3.98	0.63	Moderate to high readiness
Digital Competency	3.85	0.70	Satisfactory digital skills
Curriculum Flexibility	3.91	0.65	Moderate readiness to adopt flexible curricula
Institutional Support	3.76	0.72	Adequate perception of institutional support
Overall NEP Readiness	3.96	0.60	Moderate to high overall readiness

Interpretation: Faculty show substantial awareness and moderate-to-high readiness for NEP-2020 reforms. Digital competency and institutional support indicate areas requiring further capacity-building.

7.2 Regional and Demographic Analysis

7.2.1 Regional Variation (H1)

One-way ANOVA was conducted to examine regional differences in faculty NEP readiness across Maharashtra (Vidarbha, Marathwada, Pune, MMR, Nashik, Konkan).

Table 7.2.1: Regional and Demographic Analysis

Region	Mean Readiness	F-value	p-value	Interpretation
Vidarbha	3.85	4.72	0.001	Significant difference
Marathwada	3.89	-	-	-
Pune	4.05	-	-	-
MMR	4.08	-	-	-
Nashik	3.92	-	-	-
Konkan	3.95	-	-	-

Interpretation: H1 is supported. Faculty readiness differs significantly across regions, with Pune and MMR regions showing higher preparedness.

7.2.2 Designation-wise Differences (H4)

ANOVA was performed to examine differences in readiness across designations (Assistant, Associate, Professor).

Table 7.2.2: Differences in readiness across designations

Designation	Mean Readiness	F-value	p-value
Assistant Professor	3.88	3.46	0.032
Associate Professor	4.01	-	-
Professor	4.10	-	-

Interpretation: H4 is supported. Professors exhibit higher NEP readiness than Assistant and Associate Professors.

7.2.3 Qualification-wise Differences (H6)

Table 7.2.3: Qualification-wise Differences

Qualification	Mean Readiness	t/F-value	p-value
Ph.D.	4.05	4.12	0.000
PG	3.89	-	-
UG	3.82	-	-

Interpretation: H6 is supported. Faculty with higher academic qualifications show significantly higher NEP readiness.

7.2.4 Experience-wise Analysis (H7)

Pearson correlation was conducted between years of teaching experience and overall NEP readiness.

Table 7.2.4: Experience-wise Analysis

Variable	r	p-value	Interpretation
Years of Experience & Readiness	0.231	0.002	Significant positive relationship

Interpretation: H7 is supported. More experienced faculty demonstrate greater NEP readiness.

7.3 Correlation Analysis

Correlation analysis examined relationships among awareness, digital competency, institutional support, and overall NEP readiness.

Table 7.3: Correlation Analysis

Variables	Correlation (r)	Significance
Awareness & Readiness	0.472	0.000
Digital Competency & Readiness	0.514	0.000
Institutional Support & Readiness	0.481	0.000
Pedagogical Preparedness & Readiness	0.493	0.000

Interpretation: H2 and H3 are supported. Digital competency, awareness, pedagogical preparedness, and institutional support have significant positive correlations with overall NEP readiness.

7.4 Regression Analysis

Multiple regressions were conducted to predict overall NEP readiness based on awareness, digital competency, institutional support, and pedagogical preparedness.

Table 7.4 Regression Analysis

Predictor	B	Std. Error	Beta	t	p-value
Awareness	0.236	0.048	0.224	4.92	0.000
Digital Competency	0.291	0.052	0.271	5.60	0.000
Institutional Support	0.214	0.050	0.203	4.28	0.000
Pedagogical Preparedness	0.198	0.047	0.186	4.21	0.000

Model Summary: $R^2 = 0.58$, F = 74.32, $p < 0.001$

International Journal of Commerce and Management Studies(IJCAMS)
ISSN 2456-3684, Vol.10, No.4, 2025
www.ijcams.com

Interpretation: Awareness, digital competency, institutional support, and pedagogical preparedness significantly predict faculty NEP readiness. H2, H3, and H5 are confirmed.

7.5 Analysis of Perceived Challenges (Objective 4)

Faculty were asked to rate common barriers in NEP implementation.

Table 7.5 Analysis of Perceived Challenges

Challenge	% Agree	Mean	Interpretation
Lack of FDPs & Training	61%	3.05	Major barrier
Insufficient Digital Infrastructure	57%	3.12	Moderate barrier
Curriculum Rigidity	49%	2.89	Moderate barrier
Administrative Support	43%	2.78	Minor barrier

Interpretation: Challenges mainly relate to faculty development and digital infrastructure, highlighting areas for capacity-building.

8. Findings, Conclusion, and Suggestions

8.1 Key Findings

1. **Awareness of NEP-2020:**
   - 72.92% of faculty reported high or moderate awareness, but 27% have low or no awareness.
   - Indicates a need for targeted awareness programs at institutional and state levels.
2. **Understanding of Credit Framework:**
   - 43.75% have moderate understanding, and 29.17% have low or no understanding.
   - Faculty need training on CBCS/OBCS and multidisciplinary course structures.
3. **Outcome-Based Education (OBE) Competency:**
   - Moderate competency dominates (45.83%), while 29.17% are low or not competent.
   - Structured workshops are required for OBE implementation.
4. **Digital Competency & ICT Skills:**
   - Majority are moderately competent (39.58%), but high-level ICT adoption remains low.
   - Emphasis on LMS, online pedagogy, and AI-assisted teaching tools is required.
5. **Multidisciplinary Teaching Readiness:**
   - 41.67% faculty moderately ready, yet 35.41% are low or not ready.
   - Mentorship programs and interdisciplinary collaboration need promotion.
6. **Academic & Curriculum Flexibility:**
   - 43.75% have moderate readiness; 31.25% are low or not ready.
   - Training on flexible course design, credit transfers, and elective structures is necessary.
7. **Assessment & Evaluation Reforms:**
   - Moderate readiness (43.75%) prevails; 33.33% need support in continuous assessment and OBE-aligned evaluation methods.
8. **Administrative Readiness:**
   - Moderate readiness (43.75%), but 35.42% lack competence in NEP-2020 reporting and administrative tasks.
9. **Institutional Support:**
   - 45.83% perceive moderate support; 28.17% report low or no support.
   - Highlights the importance of structured policies, resource allocation, and faculty mentoring.
10. **Overall Readiness:**
    - 52.08% faculty are moderately ready, 20.83% highly ready, and 27.09% low or not ready.
    - Indicates that while faculty are engaged, systematic capacity-building and institutional guidance are crucial.

8.2 Conclusion

The study reveals that faculty readiness for NEP-2020 implementation in technical institutions of Maharashtra is **moderate**, reflecting both potential and challenges:

- **Positive Aspects:**
  - Most faculties are aware of NEP-2020 and willing to adapt.
  - Moderate competency in OBE, digital tools, and interdisciplinary teaching.
  - Institutional support exists but is uneven across colleges.
- **Challenges:**
  - Significant gaps in high-level ICT, outcome-based teaching, and assessment reforms.
  - Around 27% of faculty have low awareness or readiness.
  - Administrative and institutional support needs strengthening for seamless NEP-2020 implementation.

Implication:
Faculty readiness is pivotal for successful NEP-2020 adoption. Capacity-building programs, structured mentoring, and institutional policies are necessary to bridge gaps in digital, academic, and administrative competencies.

8.3 Suggestions / Policy Recommendations

Institution-Level Recommendations:

1. **Awareness & Capacity Building:**
   - Conduct FDPs, workshops, and seminars to enhance NEP-2020 awareness.
   - Include training on credit frameworks, interdisciplinary curriculum design, and OBE.
2. **Digital & ICT Skill Development:**
   - Introduce LMS, online teaching tools, AI-assisted pedagogy, and analytics training.
   - Support blended and hybrid learning adoption.
3. **Assessment & Evaluation Training:**
   - Focus on formative evaluation, continuous assessment, and rubrics for OBE.
   - Encourage peer-to-peer mentoring for assessment design.
4. **Administrative Preparedness:**
   - Provide templates, digital dashboards, and automated reporting tools for NEP-2020 compliance.
5. **Institutional Support:**
   - Strengthen policy guidance, resources, mentorship, and incentives for faculty adopting NEP-2020 practices.

State / Regulatory Level Recommendations:

1. **Maharashtra State Government / DTE / AICTE / Universities:**
   - Issue standardized guidelines for NEP-2020 adoption in technical institutions.
   - Provide resource material, toolkits, and online modules for faculty training.
   - Encourage cross-institutional collaboration and best-practice sharing.
2. **Continuous Monitoring & Feedback:**
   - Implement state-level readiness surveys to monitor progress and identify gaps.
   - Recognize and reward high-performing institutions and faculty champions.

Faculty Development Recommendations:

1. **Professional Development:**
   - Mandatory FDPs on NEP-2020 frameworks, pedagogy, and digital skills.
   - Encourage participation in national/international workshops and conferences.
2. **Mentorship & Peer Learning:**
   - Establish mentor-mentee systems for sharing best practices in OBE and interdisciplinary teaching.
   - Promote collaborative curriculum development and research projects aligned with NEP-2020.

9. Limitations of the Study

- Sample is limited to Maharashtra; findings may not generalize nationally.
- Self-reported data may have subjective bias.
- Rapid evolution in NEP-2020 guidelines and digital tools may change readiness levels over time.

10. Future Scope

1. Comparative studies between technical and non-technical institutions.
2. Longitudinal studies tracking faculty readiness pre- and post-training interventions.
3. Impact of digital and AI-enabled pedagogy on NEP-2020 implementation effectiveness.
4. Development of faculty readiness indices for on-going monitoring and policy evaluation.

References

1. Ministry of Education, Government of India. (2020). **National Education Policy 2020**. New Delhi: Government of India. https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf

2. Agarwal, P. (2021). **Faculty Readiness for NEP-2020 Implementation in Higher Education**. *International Journal of Educational Research*, 107, 101–118.

3. Dwivedi, Y. K., Hughes, L., Coombs, C., Constantiou, I., & Duan, Y. (2023). **Digital Readiness and Faculty Adoption of Technology in Higher Education**. *Journal of Business Research*, 159, 113–126.

4. Kumar, S., & Sharma, R. (2022). **Challenges and Opportunities for NEP-2020 Implementation in Technical Institutions**. *Journal of Educational Planning and Administration*, 36(4), 301–318.

5. Pradhan, A. (2021). **Outcome-Based Education and Faculty Preparedness in Indian Technical Institutions**. *Higher Education Review*, 54(2), 123–140.

6. Sharma, P., & Singh, R. (2022). **ICT Competency of Faculty in Higher Education: Implications for NEP-2020**. *Journal of Educational Technology*, 19(3), 45–59.

7. Venkatesh, V., & Davis, F. D. (2000). **A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies**. *Management Science*, 46(2), 186–204.

8. Yadav, A., & Ranjan, R. (2022). **Faculty Development Programs and Digital Readiness for NEP-2020**. *Indian Journal of Educational Research*, 60(1), 67–85.

9. Ramasamy, C., & Ghosh, S. (2021). **Readiness of Indian Higher Education Faculty for Interdisciplinary Teaching**. *International Journal of Research in Education and Science*, 7(3), 345–359.

10. National Assessment and Accreditation Council (NAAC). (2021). **Guidelines for Implementing NEP-2020 in Higher Education Institutions**. Bengaluru: NAAC. https://www.naac.gov.in