



To cite this article: Nilesh Shridhar Paul and Asha Mallikarjun Dange (2026). DIGITAL READINESS OF COMMERCE GRADUATES: BRIDGING THE SKILLS GAP BETWEEN CURRICULUM AND INDUSTRY EXPECTATIONS, International Journal of Research in Commerce and Management Studies (IJRCMS) 8 (5): 162-180 Article No. 871 Sub Id 1434

DIGITAL READINESS OF COMMERCE GRADUATES: BRIDGING THE SKILLS GAP BETWEEN CURRICULUM AND INDUSTRY EXPECTATIONS

Nilesh Shridhar Paul^{1*} and Asha Mallikarjun Dange¹

¹JSPM's Swami Vivekanand Mahavidyalaya, Latur-413512, Maharashtra, India

*Corresponding author: nileshpaul24@gmail.com

DOI: <https://doi.org/10.38193/IJRCMS.2026.8513>

ABSTRACT

Digital transformation is reshaping the competency profile expected of commerce graduates and increasing the importance of applied digital skills across accounting, finance, marketing, e-commerce, and business analytics. The present study assessed the digital readiness of Bachelor of Commerce (B. Com) students by examining student digital-skill proficiency, curriculum relevance, faculty readiness, industry expectations, and barriers to digital-skill development. A descriptive-analytical, cross-sectional mixed-method design was employed involving 100 final-year B. Com students, 20 faculty members, and 30 industry professionals/recruiters. Quantitative information was collected through structured questionnaires, while qualitative information was obtained through semi-structured interviews and curriculum-document analysis. Students demonstrated comparatively higher proficiency in accounting software (45%) and advanced MS Excel (32%), whereas data visualization represented the weakest domain, with only 15% reporting proficiency and 60% reporting no exposure. The overall Digital Readiness Index was 2.83 ± 0.71 on a five-point scale. A substantial student–industry competency gap was identified, with the largest gap observed in data visualization (63 percentage points), followed by advanced Excel (51 percentage points) and cybersecurity awareness (49 percentage points). Faculty readiness was comparatively high for basic ICT applications but lower for AI-based business tools, ERP systems, data visualization, and cloud accounting. Practical laboratory exposure showed the strongest association with digital readiness ($r = 0.65$), followed by digital-training exposure ($r = 0.62$) and industry-project exposure ($r = 0.58$). Only 18% of students were classified as highly digitally ready, whereas 82% demonstrated moderate or low readiness. The findings indicate that the digital-readiness gap is multidimensional and requires coordinated curriculum modernization, experiential learning, faculty upskilling, digital infrastructure, industry partnerships, and recognized digital credentials.

KEYWORDS: digital readiness; commerce education; digital skills; employability; curriculum alignment; industry-academia collaboration; B. Com; digital transformation

1. INTRODUCTION

Digital transformation is rapidly changing the nature of contemporary business and consequently redefining the competency profile expected of commerce graduates. The expansion of digital payment systems, e-commerce platforms, cloud-based accounting, enterprise resource planning (ERP), artificial intelligence (AI), business analytics, and digital marketing has increased the demand for graduates who can combine conventional commerce knowledge with practical technological competence. The World Economic Forum (2025) identifies analytical thinking, technological literacy, adaptability, and related digital capabilities among the increasingly important competencies required in the future workforce. Similar trends have been reported in national employability assessments, which indicate continuing gaps between graduate capabilities and workplace requirements (Wheebox et al., 2024; Mercer-Metl, 2025).

The transformation is particularly evident in accounting and finance. ERP platforms, cloud accounting, automated reporting, business-intelligence dashboards, robotic process automation, and AI-supported decision-making are becoming increasingly relevant to professional practice. Consequently, commerce graduates are expected to demonstrate more than basic computer literacy; they increasingly require proficiency in advanced spreadsheets, accounting and ERP software, data visualization, digital marketing, e-commerce, cybersecurity awareness, and cloud-based collaboration (Deloitte, 2023; Yan & Dong, 2025; Ng, 2023).

Despite these developments, higher-education curricula frequently remain dominated by theoretical instruction and conventional computer applications. Evidence from graduate and employer perspectives suggests that students may possess general familiarity with digital technologies while lacking the depth of applied competence required for workplace tasks (Zhou et al., 2025; Tee et al., 2024a). This distinction between basic familiarity and functional workplace competence is particularly important because employers increasingly seek graduates who can contribute with limited additional training.

Employer-oriented studies have identified data literacy, analytics, problem-solving, adaptability, and technological competence as important determinants of graduate employability (Tee et al., 2024a; Tee et al., 2024b; Kholifah et al., 2025). In accounting education, researchers have similarly argued that data analytics, automation, AI, and accounting-information systems should be incorporated into teaching rather than treated as peripheral or optional components (Ng, 2023; Yan & Dong, 2025; Moran, 2026).

The Indian higher-education context provides an important policy framework for addressing this challenge. The National Education Policy 2020 emphasizes multidisciplinary education, vocational exposure, experiential learning, technology integration, internships, and stronger connections between

higher education and employment. However, implementation studies indicate that substantial variation remains in digital infrastructure, industry exposure, faculty development, and curriculum modernization (Sharma, 2025; Daryal & Sharma, 2025; Shettar, 2025).

The digital-readiness challenge therefore cannot be considered solely a student-level deficiency. Curriculum design, faculty preparedness, access to technology, practical learning, industry engagement, internships, and professional certification may collectively influence graduate readiness. Industry–academia partnerships and micro-credentialing have consequently emerged as potential mechanisms for strengthening employability and reducing the distance between academic learning and workplace requirements (Sharma et al., 2024; Tee et al., 2024b).

Against this background, the present study adopts a multi-stakeholder perspective to assess the digital readiness of B. Com students and examine the alignment between student competencies, curriculum provision, faculty preparedness, and industry expectations.

2. MATERIALS AND METHODS

2.1 Research Design and Study Framework

A descriptive-analytical, cross-sectional mixed-method research design was adopted to investigate digital readiness among commerce graduates. The quantitative component measured digital-skill proficiency, perceived curriculum relevance, faculty readiness, industry expectations, exposure to digital learning opportunities, and barriers to skill development. The qualitative component complemented the quantitative findings through faculty and industry interviews and curriculum-document analysis.

A multi-stakeholder framework was used because digital employability is influenced not only by individual student capability but also by curriculum design, instructional capacity, institutional resources, and workplace expectations.

2.2 Study Setting and Duration

The study was conducted among selected higher-education institutions offering undergraduate commerce education in Maharashtra, India. Data collection was undertaken. Questionnaire development and pilot testing were completed before the main survey, while curriculum review, interviews, data compilation, and analysis were conducted concurrently during the study period.

2.3 Study Population and Sample

The study population comprised three stakeholder groups directly connected with commerce education and graduate employability: final-year B. Com students, commerce/accounting faculty members, and industry professionals or recruiters.

A total of 150 respondents participated in the study, comprising 100 final-year B.Com students, 20 faculty members, and 30 industry professionals/recruiters.

Table 1. Study sample composition

Respondent group	Sample size (n)	Percentage of total sample
Final-year B.Com students	100	66.7
Faculty members	20	13.3
Industry professionals/recruiters	30	20.0
Total	150	100.0

2.4 Sampling Procedure

Participants were selected using **purposive sampling**. This approach was adopted to ensure that respondents had direct and relevant exposure to either commerce education or digitally enabled business practice.

Final-year students were selected because they had completed most of their undergraduate curriculum and were approaching transition into employment or postgraduate education. Faculty members were selected from commerce and accounting-related disciplines. Industry participants were selected based on their involvement in recruitment, supervision, accounting, finance, business operations, human resources, or related functions involving commerce graduates.

2.5 Eligibility Criteria

Students were eligible if they were enrolled in the final year of a B.Com programme during the study period. Faculty members were required to have at least one year of teaching experience in commerce, accounting, finance, management, or closely related subjects. Industry participants were required to have direct experience in recruiting, supervising, or working with commerce or finance graduates.

Students from earlier years, faculty members from unrelated academic disciplines, faculty members with less than one year of teaching experience, and industry professionals without relevant recruitment or domain responsibilities were excluded.

2.6 Data Collection Instruments

A structured questionnaire was developed based on the objectives of the study and themes identified in the contemporary literature on digital employability, commerce education, and industry skill requirements. The questionnaire covered demographic and academic characteristics, exposure to digital tools, digital-skill proficiency, perceived curriculum relevance, practical and laboratory exposure, internship and industry-project experience, participation in digital training, professional certification, perceived employability, barriers to digital-skill development, and industry expectations.

Faculty respondents were additionally assessed with respect to curriculum relevance, access to current software, professional-development opportunities, and preparedness to teach emerging digital competencies. Industry respondents were asked to identify the technical, digital, analytical, and transferable competencies expected from entry-level commerce graduates.

A semi-structured interview schedule was also developed for selected faculty members and industry professionals. The interviews explored curriculum limitations, availability of digital infrastructure, practical training opportunities, internship provisions, faculty development, industry requirements, and mechanisms for strengthening industry–academia collaboration. The qualitative information obtained through these interviews was used to complement and contextualize the quantitative findings.

2.7 Curriculum-Document Analysis

Selected B.Com curricula were systematically reviewed to determine the extent to which contemporary digital competencies were represented. The curriculum was compared against competency domains identified through the literature and industry responses, including advanced Excel, accounting software, ERP, data visualization, digital marketing, e-commerce, cloud accounting, cybersecurity, and AI-assisted business analytics.

Each competency was categorized according to its level of curriculum coverage as high, moderate, low, or very low. Industry priority was categorized as moderate, high, or very high. Curriculum–industry alignment was subsequently interpreted as high, good, partial, or poor.

2.8 Measurement of Digital Readiness

Digital readiness was assessed across five principal competency domains: advanced MS Excel, accounting software, data visualization, digital marketing, and e-commerce operations. These domains were selected because they represent commonly used digital competencies across contemporary accounting, finance, marketing, business operations, and e-commerce environments.

Student responses were assessed using a five-point competency scale, with higher scores indicating greater perceived competence. The Digital Readiness Index (DRI) was calculated as the composite mean of the five domain scores. The resulting DRI ranged from 1 to 5, with higher values indicating greater overall digital readiness.

For ease of interpretation, the DRI was converted to a 100-point equivalent using the corresponding proportional transformation. Students were subsequently classified into three readiness categories: high readiness (≥ 75), moderate readiness (50–74), and low readiness (< 50).

2.9 Assessment of Faculty Readiness

Faculty digital readiness was assessed using a five-point scale across eight competency domains: basic ICT, accounting software, advanced Excel, data visualization, ERP systems, digital marketing, AI-based business tools, and cloud accounting. These domains were selected to reflect both established and emerging technologies relevant to contemporary commerce education.

Mean scores and standard deviations were calculated for each competency domain. Faculty members were also asked to indicate whether they considered themselves adequately prepared to teach, demonstrate, or facilitate learning in each of the assessed digital competency areas. The percentage of faculty reporting adequate readiness was calculated for each domain.

2.10 Assessment of Student–Industry Skills Gap

The student–industry skills gap was assessed by comparing the proportion of students reporting proficiency in each digital competency with the proportion of industry professionals identifying the same competency as an expected skill for entry-level commerce graduates.

The skills gap was calculated as follows:

Skills gap (percentage points) = Industry expectation (%) – Student proficiency (%)

A positive value indicated that industry expectations exceeded current student proficiency. A larger positive value represented a greater discrepancy between the competencies possessed by students and those expected by employers.

2.11 Assessment of Barriers to Digital-Skill Development

Students and faculty members were asked to identify factors that may constrain the development of digital competencies. The assessed barriers included insufficient practical sessions, limited access to industry-standard software, outdated curriculum content, limited faculty training, inadequate internship opportunities, software and licensing costs, restricted classroom time, and limited opportunities for professional certification.

Responses were summarized as frequencies and percentages within the respective student and faculty groups. Comparison of the two groups was used to identify areas of convergence and divergence in perceptions regarding institutional and educational barriers to digital-skill development.

2.12 Statistical Analysis

The collected data were coded, organized, and analysed using descriptive and correlational statistical procedures. Categorical variables were summarized using frequencies and percentages, while

continuous competency scores were expressed as mean $\pm$ standard deviation (SD).

The Digital Readiness Index was calculated from the mean scores of the five student competency domains. Student–industry competency gaps were calculated in percentage points by comparing student-reported proficiency with industry-reported expectations.

Pearson's correlation coefficient (r) was used to examine the strength and direction of the association between selected digital-exposure variables and overall digital readiness. The exposure variables included participation in digital training, internship experience, industry-project involvement, professional certification, and practical laboratory exposure.

Qualitative information obtained through semi-structured interviews and open-ended responses was analysed thematically. Recurring themes relating to curriculum relevance, digital infrastructure, faculty preparedness, practical and experiential learning, internship opportunities, and industry engagement were identified and used to contextualize the quantitative findings.

Because the study employed a cross-sectional design, correlation coefficients were interpreted as measures of association and were not considered evidence of causal relationships.

2.13 Ethical Considerations

Participation was voluntary. Participants were informed about the purpose of the study and the intended academic use of the information. Confidentiality was maintained, and individual respondents were not identified in the analysis or reporting.

3. RESULTS

3.1 Digital-Skill Proficiency Among B. Com Students

The assessment of five digital-skill domains revealed substantial variation in student proficiency. Accounting software represented the strongest competency, with 45% of students reporting proficiency. Advanced MS Excel was reported as a proficient skill by 32% of students. Digital marketing and e-commerce operations showed lower proficiency levels of 28% and 22%, respectively.

Data visualization was the weakest competency. Only 15% of students reported proficiency, while 25% reported basic knowledge and 60% reported no exposure.

Table 2. Self-reported digital-skill proficiency among B.Com students (n = 100)

Skill area	Proficient (%)	Basic knowledge (%)	No exposure (%)
Advanced MS Excel	32	48	20
Accounting software	45	38	17
Data visualization	15	25	60
Digital marketing	28	37	35
E-commerce operations	22	40	38

The findings indicate that student digital competence remains concentrated in conventional accounting and office-productivity applications, while newer analytical and digitally enabled business technologies remain less accessible.

3.2 Soft-Skill Assessment

Industry respondents identified communication as a relative strength among commerce graduates, with 64% reporting it positively, followed by teamwork at 58%. In contrast, 42% identified critical thinking and problem-solving as weak, while 38% considered technological adaptability to be weak.

These findings suggest that digital employability requires both technical capability and transferable skills that enable graduates to adapt to changing technologies and workplace environments.

3.3 Curriculum Relevance

Seventy-two percent of students reported exposure to computer-related subjects within their B.Com curriculum. However, the reported content was largely concentrated on basic MS Office applications rather than advanced industry-oriented technologies.

Among faculty members, 85% considered the curriculum outdated with respect to digital-skill integration, and 60% reported limited access to current software and professional-development opportunities.

3.4 Industry Expectations

Industry professionals identified ERP/accounting software, advanced Excel, data analytics, e-commerce, digital marketing, cybersecurity awareness, and cloud collaboration as important competencies for entry-level commerce graduates.

A substantial mismatch was observed in data analytics and visualization. While 78% of industry respondents identified analytics/visualization competence as an expected graduate capability, only 15% of students reported proficiency in this area.

3.5 Digital Readiness Index

The mean DRI scores demonstrated considerable variation across the five assessed domains.

Table 3. Digital Readiness Index among students

Digital-skill domain	Mean $\pm$ SD	Readiness level
Advanced MS Excel	3.12 $\pm$ 0.84	Moderate
Accounting software	3.48 $\pm$ 0.79	Moderate–High
Data visualization	2.18 $\pm$ 0.91	Low
Digital marketing	2.74 $\pm$ 0.88	Moderate
E-commerce operations	2.61 $\pm$ 0.93	Moderate
Overall DRI	2.83 $\pm$ 0.71	Moderate–Low

Accounting software recorded the highest mean score, whereas data visualization recorded the lowest. The overall DRI of 2.83 $\pm$ 0.71 indicates moderate-to-low digital readiness among the participating students.

3.6 Student–Industry Skills Gap

A comparison of student proficiency with industry expectations demonstrated substantial gaps across all assessed competencies.

Table 4. Student proficiency versus industry expectations

Skill	Student proficiency (%)	Industry expectation (%)	Gap (percentage points)
Advanced Excel	32	83	51
Accounting/ERP software	45	87	42
Data visualization	15	78	63
Digital marketing	28	73	45
E-commerce operations	22	70	48
Cybersecurity awareness	18	67	49
Cloud collaboration tools	25	73	48

The largest mismatch occurred in data visualization, with a gap of 63 percentage points. Advanced Excel showed a 51-point gap, while cybersecurity awareness showed a 49-point gap. These findings

indicate that the digital-readiness challenge extends beyond traditional accounting applications to analytics, cybersecurity, cloud collaboration, and digitally enabled business processes.

Figure 1 compares the self-reported digital-skill proficiency of B.Com students with the digital competencies expected by industry professionals. A clear gap was observed across all competency areas, with the largest gap in data visualization (63 percentage points), followed by advanced Excel (51 percentage points) and cybersecurity awareness (49 percentage points). This highlights the need for stronger industry-oriented digital training.

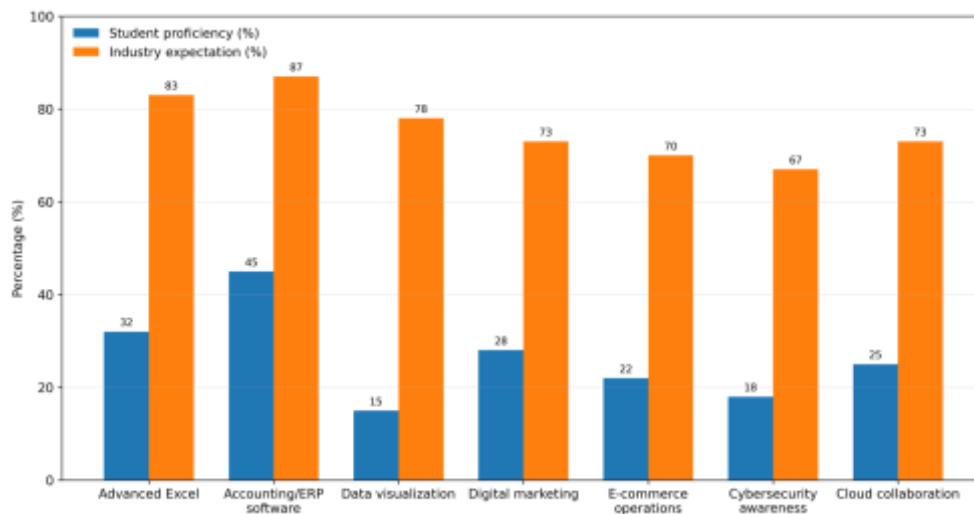


Figure 1. Comparison of student digital-skill proficiency and industry expectations across major digital competency domains.

3.7 Curriculum–Industry Alignment

The curriculum audit indicated that approximately 68% of identified digital competencies were either absent or insufficiently represented.

Table 5. Curriculum coverage and industry priority

Competency	Curriculum coverage	Industry priority	Alignment
Basic MS Office	High	Moderate	High
Advanced Excel	Moderate	Very high	Partial
Tally/accounting software	High	Very high	Good
ERP/SAP	Low	Very high	Poor
Power BI/Tableau	Very low	Very high	Poor

Digital marketing	Moderate	High	Partial
E-commerce	Moderate	High	Partial
Cloud accounting	Low	High	Poor
Cybersecurity	Very low	High	Poor
AI-assisted business analytics	Very low	High	Poor

The strongest alignment occurred in basic ICT and accounting software. In contrast, ERP, business intelligence, cloud accounting, cybersecurity, and AI-assisted analytics showed poor alignment.

3.8 Faculty Digital Readiness

Faculty readiness was highest for basic ICT and accounting software. The lowest levels were observed for AI-based business tools and ERP systems, indicating that faculty-development initiatives should accompany curriculum modernization.

Table 6. Faculty readiness across digital competencies

Faculty competency	Mean $\pm$ SD	Adequate readiness (%)
MS Office/basic ICT	4.10 $\pm$ 0.62	90
Accounting software	3.55 $\pm$ 0.81	70
Advanced Excel	3.05 $\pm$ 0.92	55
Data visualization	2.35 $\pm$ 0.87	35
ERP systems	2.20 $\pm$ 0.91	30
Digital marketing	2.70 $\pm$ 0.88	40
AI-based business tools	2.15 $\pm$ 0.83	25
Cloud accounting	2.45 $\pm$ 0.89	35

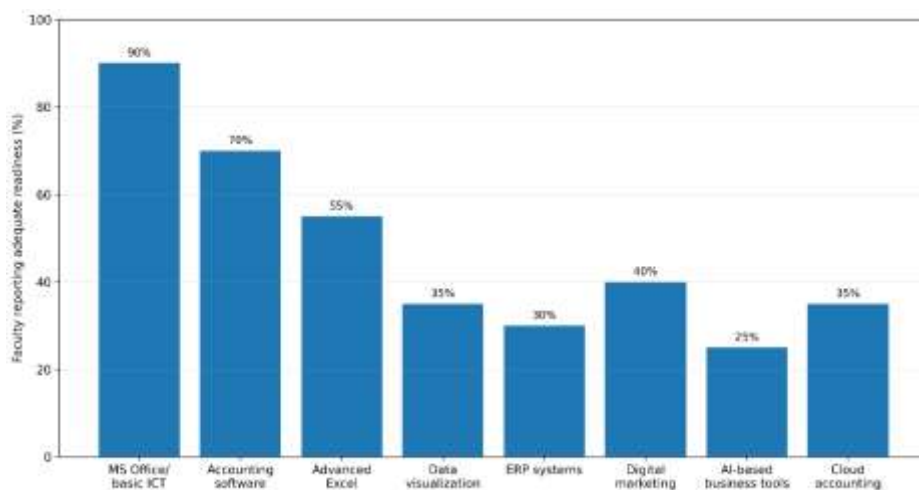


Figure 2. Percentage of faculty members reporting adequate readiness across digital competency domains.

Figure 2 presents the percentage of faculty members reporting adequate readiness across different digital competency domains. Faculty readiness was highest for MS Office/basic ICT (90%) and accounting software (70%), while substantially lower readiness was observed for AI-based business tools (25%), ERP systems (30%), and data visualization (35%). These findings emphasize the importance of continuous faculty development alongside curriculum modernization.

3.9 Perceived Barriers to Digital-Skill Development

Table 7. Barriers reported by students and faculty

Barrier	Students (%)	Faculty (%)
Limited access to industry software	62	70
Insufficient practical sessions	68	65
Outdated curriculum	55	85
Limited faculty training	48	60
Lack of industry internships	57	75
Software/licensing costs	44	55
Limited classroom time	52	65
Lack of certification opportunities	61	50

Insufficient practical sessions were the most frequently reported student-level barrier, whereas outdated curriculum was the dominant concern among faculty members. Lack of industry internships and limited access to industry software were also frequently reported.

3.10 Relationship Between Digital Exposure and Readiness

Table 8. Association between digital exposure and overall readiness

Variable pair	Pearson's <i>r</i>	Interpretation
Digital-training exposure × readiness	0.62	Moderate–strong positive
Internship exposure × readiness	0.54	Moderate positive
Industry-project exposure × readiness	0.58	Moderate positive
Certification × readiness	0.49	Moderate positive
Practical laboratory exposure × readiness	0.65	Strong positive

Practical laboratory exposure showed the strongest association with overall digital readiness ($r = 0.65$), followed by digital-training exposure ($r = 0.62$) and industry-project exposure ($r = 0.58$). These findings indicate that experiential exposure is closely associated with higher digital readiness, although the cross-sectional design does not permit causal conclusions.

3.11 Digital-Readiness Classification

Table 9. Classification of students according to digital readiness

Readiness category	Equivalent score range	n	%
High readiness	≥ 75	18	18
Moderate readiness	50–74	54	54
Low readiness	< 50	28	28
Total		100	100

Only 18% of students were categorized as highly digitally ready, while 54% demonstrated moderate readiness and 28% demonstrated low readiness. Thus, more than four-fifths of the participating students were below the high-readiness category.

4. DISCUSSION

The present study demonstrates a substantial mismatch between the digital competencies of B.Com students and the capabilities expected by industry. Students showed comparatively stronger competence in accounting software and conventional spreadsheet applications, whereas data visualization, e-commerce, cybersecurity, cloud technologies, and other emerging digital competencies were considerably weaker.

These findings are broadly consistent with evidence that graduates often possess general digital familiarity without the advanced, applied competencies increasingly demanded by employers (Zhou et al., 2025; Tee et al., 2024a). The results also support recent arguments that commerce and accounting education needs to incorporate analytics, automation, AI, and information systems more systematically (Ng, 2023; Yan & Dong, 2025; Moran, 2026).

4.1 Digital Readiness and the Skills Gap

The overall DRI of 2.83 ± 0.71 indicates moderate-to-low readiness. Accounting software showed the highest mean score, whereas data visualization showed the lowest. This pattern suggests that conventional accounting technology has been incorporated into commerce education to a greater extent than newer analytical technologies.

The student–industry comparison provides stronger evidence of the mismatch. The 63-percentage-point gap in data visualization was the largest observed gap. Similar gaps were identified for advanced Excel, cybersecurity, cloud collaboration, e-commerce, and digital marketing.

The findings demonstrate that digital readiness should not be equated with basic computer literacy. Contemporary commerce graduates increasingly need to apply digital technologies to analyse information, solve business problems, communicate insights, and support decision-making.

4.2 Curriculum Modernization

The curriculum audit showed strong representation of basic ICT and accounting software but limited coverage of ERP, Power BI/Tableau, cloud accounting, cybersecurity, and AI-assisted business analytics.

This pattern is consistent with the broader literature calling for accounting and commerce curricula to incorporate emerging technologies as integrated components rather than isolated or optional topics (Ng, 2023; Yan & Dong, 2025).

Curriculum modernization should therefore involve more than adding a separate computer course. Digital competencies should be embedded within accounting, finance, taxation, marketing, entrepreneurship, business analytics, and management subjects.

4.3 Faculty Preparedness

The faculty results highlight an important institutional dimension of the digital-readiness gap. Although 90% of faculty reported adequate readiness in basic ICT, only 25% reported adequate readiness for AI-based business tools, while readiness for ERP and data visualization was 30% and 35%, respectively.

This suggests that curriculum modernization without faculty development may have limited practical impact. Faculty members require continuous professional-development opportunities, hands-on exposure to current software, access to industry experts, and opportunities to update their knowledge of emerging technologies.

4.4 Importance of Experiential Learning

Practical laboratory exposure demonstrated the strongest association with digital readiness ($r = 0.65$). Digital-training exposure and industry-project participation also demonstrated comparatively strong positive associations.

These results support the growing emphasis on experiential and work-integrated learning. Live projects, internships, simulations, industry case studies, digital laboratories, and project-based assessment can provide students with opportunities to translate theoretical concepts into practical competence.

Micro-credentialing may further complement formal curricula by enabling students to obtain externally recognizable evidence of competency in specific digital technologies (Sharma et al., 2024; Tee et al., 2024b).

4.5 Industry–Academia Collaboration

The magnitude of the student–industry gap indicates the need for more systematic industry participation in commerce education. Employers can contribute by participating in curriculum advisory committees, providing internships, offering live projects, supporting professional certification, conducting technology workshops, and providing access to relevant software.

Such collaboration would enable curricula to respond more rapidly to changing workplace requirements and could reduce the time required for graduates to transition from academic learning to professional practice.

4.6 Implications for Indian Commerce Education

The findings have particular relevance to NEP 2020, which emphasizes employability, multidisciplinary learning, technology integration, vocational exposure, internships, and stronger higher-education–industry relationships (Daryal & Sharma, 2025; Sharma, 2025).

A practical implementation strategy would be to develop a **Digital Commerce Competency Framework** with three progressive levels:

Level 1 – Digital Foundation:

Basic ICT, digital communication, cybersecurity awareness and digital documentation.

Level 2 – Applied Commerce Technology:

Advanced Excel, accounting software, cloud accounting, digital marketing and e-commerce.

Level 3 – Advanced Digital Commerce:

ERP, Power BI/Tableau, business analytics, AI-assisted decision-making, automation and data-driven business intelligence.

Such a framework could provide a structured pathway from basic digital literacy to industry-oriented digital employability.

5. RECOMMENDATIONS

5.1 Student-Level Interventions

B.Com students should be encouraged to develop competencies beyond the formal curriculum through advanced Excel, Power BI/Tableau, ERP, cloud accounting, digital marketing, cybersecurity and AI-related learning. Internships, live projects, certification programmes and interdisciplinary projects should form an important component of professional preparation.

5.2 Institutional Interventions

Higher-education institutions should:

- revise B.Com curricula regularly;
- integrate advanced digital technologies into core commerce subjects;
- establish digital commerce laboratories;
- provide access to accounting, ERP and analytics software;
- organize continuous faculty-development programmes;
- strengthen internship and apprenticeship mechanisms;
- introduce live-project and simulation-based assessment; and
- support recognized digital micro-credentials.

5.3 Faculty Development

Faculty-development programmes should focus on practical competency rather than only theoretical awareness. Training should include advanced Excel, data visualization, ERP, cloud accounting, digital marketing, AI-assisted business applications, cybersecurity, and contemporary accounting-information systems.

5.4 Industry Participation

Industry should be encouraged to participate in curriculum advisory committees and provide internships, mentorship, live projects, guest lectures, software access, skill-based workshops, and professional certification opportunities.

5.5 Continuous Curriculum Review

Because digital technologies evolve rapidly, institutions should establish an annual curriculum-review mechanism involving faculty, students, alumni, employers, and industry experts. This would help ensure that commerce programmes remain responsive to changing occupational requirements.

6. CONCLUSION

The present study identifies a substantial digital-readiness gap among B.Com students when compared with contemporary industry expectations. Students demonstrated relatively stronger competence in accounting software and conventional computer applications but considerably lower proficiency in data visualization, advanced analytics, e-commerce, cybersecurity, cloud technologies, ERP, and AI-enabled business tools.

The overall Digital Readiness Index of 2.83 ± 0.71 indicates moderate-to-low readiness, while only 18% of students were classified as highly digitally ready. The largest student–industry gap was observed for data visualization, followed by advanced Excel and cybersecurity awareness.

The findings further demonstrate that the digital-readiness challenge is multidimensional. Curriculum limitations, insufficient practical exposure, faculty-development needs, inadequate access to industry software, limited internships, and insufficient industry engagement collectively influence the preparation of commerce graduates.

Practical laboratory exposure showed the strongest association with digital readiness, emphasizing the importance of experiential learning. Accordingly, closing the digital skills gap requires a coordinated transformation involving curriculum modernization, faculty upskilling, digital infrastructure, practical learning, industry collaboration, internships, and recognized digital credentials.

The study provides a practical framework for transitioning commerce education from basic computer literacy toward applied digital competence and industry-oriented employability.

REFERENCES

- Daryal, N., & Sharma, R. K. (2025). Bridging academia and industry under NEP 2020. *International Journal of Novel Research and Development*, 10(6).
- Deloitte. (2023). *Digital transformation in finance and accounting: Trends and insights*. Deloitte Insights.
- Kholifah, N., Nurtanto, M., Sutrisno, V. L. P., Majid, N. W. A., Subakti, H., Daryono, R. W., et al. (2025). Unlocking workforce readiness through digital employability skills in vocational education graduates: A PLS-SEM analysis based on human capital theory. *Social Sciences & Humanities Open*, 11, 101625. <https://doi.org/10.1016/j.ssaho.2025.101625>
- Mercer-Mettl. (2025). *India's Graduate Skill Index 2025*. Mercer-Mettl. The report analyses data from more than 2,700 campuses and over one million students.

Moran, W. (2026). A modern curriculum: Data-driven decision making and AI in accounting. *Journal of Accounting and Business Education*, 10(3), 20–48.
<https://doi.org/10.17977/jabe.v10i3.65285>

Ng, C. (2023). Teaching advanced data analytics, robotic process automation, and artificial intelligence in a graduate accounting program. *Journal of Emerging Technologies in Accounting*, 20(1), 223–243. <https://doi.org/10.2308/JETA-2022-025>

Sharma, D. L. (2025). Revamping commerce and management education in the digital era: The road ahead. *International Journal of Research in Commerce and Management Studies*, 7(1), 234–240.

Sharma, H., Jain, V., Mogaji, E., & Babbilid, A. S. (2024). Blended learning and augmented employability: A multi-stakeholder perspective of the micro-credentialing ecosystem in higher education. *International Journal of Educational Management*, 38(4), 1021–1044.
<https://doi.org/10.1108/IJEM-12-2022-0497>

Shettar, R. M. (2025). Higher education and employability in India: An overview. *IOSR Journal of Business and Management*, 27(1), 61–66.

Tee, P. K., Cham, T. H., Aw, E. C. X., Khudaykulov, A., & Zhang, X. (2024). Marketing micro-credentials: Understanding learners' engagement and willingness to pay more. *International Journal of Educational Management*, 38(4), 1001–1020. <https://doi.org/10.1108/IJEM-03-2023-0096>

Tee, P. K., Song, B. L., Ho, M. K., Wong, L. C., & Lim, K. Y. (2024). Bridging the gaps in digital skills: Employer insights on digital skill demands, micro-credentials, and graduate employability. *Journal of Infrastructure, Policy and Development*, 8(9), 7313.
<https://doi.org/10.24294/jipd.v8i9.7313>

Tee, P. K., Wong, L. C., Dada, M., Song, B. L., & Ng, C. P. (2024). Demand for digital skills, skill gaps and graduate employability: Evidence from employers in Malaysia. *F1000Research*, 13, 389.
<https://doi.org/10.12688/f1000research.148514.1>

Wheebox, All India Council for Technical Education, Confederation of Indian Industry, & Association of Indian Universities. (2024). *India Skills Report 2025: Global Talent Mobility—India's Decade*. Wheebox.

World Economic Forum. (2025). *The Future of Jobs Report 2025*. Geneva: World Economic Forum.



Yan, D., & Dong, Y. (2025). Updating and practical research on teaching content of accounting information system in the context of big data. *Applied Mathematics and Nonlinear Sciences*, 10(1). <https://doi.org/10.2478/amns-2025-0075>

Zhou, X., Wolstencroft, P., Schofield, L. N., & Fang, L. (2025). Are graduates digitally unprepared? —A digital technology gap analysis from alumni and employer's perspectives. *Journal of Computer Assisted Learning*, 41(4), e70046. <https://doi.org/10.1111/jcal.70046>