

ARTIFICIAL INTELLIGENCE AND SKILL DEVELOPMENT: TRANSFORMING THE EMPLOYABILITY OF COMMERCE GRADUATES IN THE DIGITAL ERA

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Abstract—*Artificial Intelligence (AI) is transforming the landscape of skill development and employability, particularly among commerce graduates in emerging regions like Belagavi District, Karnataka. This study examines the impact of AI-driven skill development programs on employability outcomes, corporate readiness, and workplace conditions. Using a descriptive and analytical research design, primary data was collected from 200 commerce graduates through structured questionnaires, supported by secondary data from academic and policy sources. The findings reveal that a majority of students possess moderate to high awareness of AI tools, with significant improvements observed in financial forecasting, automated reporting, and data analytics skills. AI exposure has positively influenced employability indicators such as job placement rates, interview success, and corporate role suitability. However, concerns regarding skill obsolescence, ethical issues, and job security persist. Additionally, infrastructural limitations, high training costs, and faculty expertise gaps act as major barriers to AI integration in education. The study emphasizes the need for continuous upskilling, curriculum reforms, and institutional support to bridge skill gaps. Overall, AI plays a dual role as both an enabler of employability and a driver of new challenges, requiring strategic interventions for sustainable workforce development.*

Keywords: *Artificial Intelligence (AI), Skill Development, employability, Digital Era.*

Introduction

Artificial Intelligence (AI) has emerged as a transformative force in the modern digital economy, significantly influencing skill development and employability, particularly in commerce education. Traditional commerce curricula, which primarily focus on accounting, finance, and marketing, are increasingly becoming insufficient without the integration of AI-based tools and technologies. In regions like Belagavi District of Karnataka, where a large number of students pursue commerce education, the need to incorporate AI skills has become essential to meet the evolving demands of the corporate sector. AI enables data-driven decision-making, automation of routine tasks, and improved efficiency, thereby enhancing the overall competence of commerce graduates.

With Karnataka actively promoting AI innovation and digital skill development, commerce graduates in Belagavi are presented with both opportunities and challenges. While AI adoption improves employability outcomes such as job placement, interview success, and workplace productivity, it also raises concerns related to skill obsolescence, job security, and access to quality training. Factors such as lack of infrastructure, high cost of AI training, and gaps in faculty expertise further hinder effective implementation. Therefore, this study aims to analyze the role of AI in transforming skill development and employability, while identifying key challenges and suggesting strategies to ensure that graduates are well-equipped for the dynamic digital economy.

Review of Literature

Several Indian scholars have examined the intersection of AI, skill development, and employability, particularly in the context of commerce and management education. Mishra and Srivastava (2024) investigated the impact of AI on employment of Indian workers, finding that AI could displace 5.1 million jobs by 2025 in traditional sectors like manufacturing and banking but create 2.3 million new roles in high-tech areas. They emphasized the need for upskilling in AI technologies to bridge the skills gap, noting a shortage of approximately 200,000 AI professionals in India.

Jathan (2025) analyzed the influence of AI and automation on the commerce curriculum in Indian universities, arguing for urgent curriculum revisions to incorporate AI concepts for personalized learning, critical thinking, and employability in automated economies. The study highlighted gaps in student preparedness and advocated technology-driven pedagogy to align commerce education with industry demands.

Bajpai and Tiwari (2025) explored transforming employment in the AI and automation era, underscoring job polarization and the critical role of reskilling programs for Indian youth in commerce and allied fields.

Kumar (2025) examined the multifaceted impact of AI on the future of employment in India, highlighting both displacement in routine commerce tasks and creation of opportunities in fintech and data analytics roles.

Sharma (2026) conducted a study on awareness and usage of AI tools among commerce graduates, revealing positive correlations with employability skills but persistent rural-urban divides in access.

Gupta and Ansari (2023) focused on employability skills of management graduates in India, demonstrating how perceived internal and external skills, including emerging tech competencies, enhance job quality and satisfaction in competitive sectors.

These studies collectively affirm AI's disruptive yet enabling role in India's labor market, with a consensus on the urgency of skill-centric interventions for commerce graduates.

Need for the Study

Despite growing AI adoption in Karnataka, commerce graduates in semi-urban districts like Belagavi often lag in AI skill acquisition due to limited infrastructure, outdated curricula, and awareness gaps. Existing literature predominantly addresses national or metro-centric contexts, leaving regional nuances—such as Belagavi's unique blend of traditional commerce education and

emerging digital opportunities—under-explored. This study addresses this void by providing empirical evidence on AI's transformative impact on employability, corporate adaptation, and skill gaps, informing policymakers, educators, and industry stakeholders.

Relevance of the Study

The research holds significant relevance for Belagavi's educational ecosystem and Karnataka's broader AI vision. It offers actionable insights for curriculum designers to integrate AI modules, equips graduates with competitive edges in corporate roles, and supports government skilling initiatives like PMKVY and state-level AI programs. By focusing on employability transformation, the study contributes to sustainable economic growth, reducing youth unemployment, and positioning Belagavi as a model for AI-inclusive commerce education in non-metro regions.

Objectives of the Study

1. To assess the extent to which AI-driven skill development programs enhance the employability of commerce graduates in Belagavi District, with specific reference to corporate job readiness and working conditions.
2. To identify key challenges and opportunities in integrating AI skills into commerce education and their impact on graduates' performance in the digital corporate environment.

Research Methodology

The study adopted a descriptive and analytical research design, employing both primary and secondary data sources. Primary data was collected through a convenience questionnaire administered to 250 commerce graduates from selected colleges in Belagavi District using stratified random sampling to ensure representation across gender, age, and academic performance. Out of 250 distributed, 200 valid responses (80% response rate) were analyzed using statistical tools like percentages, mean, co-relation. The questionnaire comprised 25 items covering demographics, AI awareness, skill acquisition, employability perceptions, and corporate experiences (5-point Likert scale for attitudinal questions).

Secondary data was sourced from journals, NITI Aayog reports, government publications on AI skilling, and industry reports on Karnataka’s digital economy. Ethical considerations, including informed consent and data anonymity, were strictly followed.

Data Analysis

Data analysis is presented in tabular form, supplemented by brief interpretive notes for clarity. The analysis focuses on AI’s role in skill development, employability transformation, and corporate working conditions among Belagavi commerce graduates.

Table 1: Demographic Profile of Respondents (N=200)

Variable	Category	Frequency	Percentage (%)
Gender	Male	112	56
	Female	88	44
Age Group	20-22 years	85	42.5
	23-25 years	95	47.5
	Above 25 years	20	10
Academic Level	B. Com	130	65
	M.Com	70	35
Exposure to AI Training	Yes	135	67.5
	No	65	32.5

The table shows that the majority of respondents are male (56%), while females make up 44%, indicating a slightly higher male participation. Most respondents belong to the 23–25 years age group (47.5%), followed closely by those aged 20–22 years (42.5%), with only a small proportion above 25 years (10%), suggesting the sample is largely composed of young individuals. In terms of education, a significant majority are B. Com final year students (65%), while M. Com students account for 35%, indicating more undergraduate representation. Regarding AI exposure, 67.5% of respondents have received AI training, while 32.5% have not, showing that a majority are familiar with AI concepts.

Table 2: Level of Awareness of AI Tools among Commerce Graduates

AI Tool/Category	High Awareness (%)	Moderate (%)	Low/No Awareness (%)
Chat GPT / Generative AI	72	18	10
Data Analytics (Excel + Python)	65	25	10
Accounting Automation (e.g., QuickBooks AI)	58	28	14
Marketing Analytics Tools	51	32	17
Overall, AI Literacy	62	26	12

The table indicates that awareness is highest for Chat GPT/Generative AI (72%), showing that respondents are highly familiar with modern AI technologies. Data Analytics tools also have a strong level of awareness (65%), reflecting good technical knowledge among participants. Awareness of Accounting Automation is moderate (58%), suggesting that respondents have some understanding but may require further exposure. Marketing Analytics Tools show the lowest level of high awareness (51%) and the highest low/no awareness (17%), indicating comparatively limited knowledge in this

area. Overall, AI literacy stands at 62% high awareness, which suggests a fairly good level of understanding, though there is still room for improvement.

Table 3: Indicates Correlation between AI awareness factors among Commerce Graduates.

H₀: There is no significant relationship among different AI awareness factors among commerce graduates.

Variables	Chat GPT	Data Analytics	Accounting Automation	Marketing Analytics
Chat GPT	1			
Data Analytics	0.982	1		
Accounting Automation	0.964	0.991	1	
Marketing Analytics	0.948	0.972	0.988	1

Indicates significance at 1% level.

The correlation matrix shows very high positive correlations ($r > 0.94$) among all AI awareness variables. This indicates that awareness of one AI tool is strongly associated with awareness of other tools. i.e., awareness of Chat GPT is highly correlated with Data Analytics ($r = 0.982$). The significance level ($p < 0.01$) confirms that these relationships are statistically significant. Therefore, the null hypothesis (H₀) is rejected. It can be concluded that AI awareness dimensions are interrelated and form a unified competency among commerce graduates.

**Table 4: AI Skills Acquired and Their Perceived Impact on Skill Development
(Mean Score on 5-point Likert Scale, where 5=Strongly Agree)**

Skill Area	Mean Score	% Reporting Significant Improvement
Financial Forecasting & Modeling	4.2	81
Automated Report Generation	4.1	78
Predictive Analytics in Marketing	3.9	72
Supply Chain Optimization	3.7	68
Ethical AI Decision-Making	3.5	59

The table shows that respondents reported the highest improvement in Financial Forecasting & Modeling (mean 4.2, 81%), followed closely by Automated Report Generation (4.1, 78%). Predictive Analytics in Marketing shows moderate improvement (3.9, 72%), while Supply Chain Optimization is slightly lower (3.7, 68%). Ethical AI Decision-Making has the lowest improvement (3.5, 59%), indicating comparatively less development in this area.

Table 5: Impact of AI Skills on Employability Outcomes

Employability Indicator	Improved (%)	No Change (%)	Declined (%)
Job Placement Rate	78	18	4
Starting Salary (vs. non-AI peers)	65	28	7
Interview Success Rate	82	15	3
Corporate Role Suitability	75	20	5

Table 6: Changes in Corporate Working Conditions Due to AI (Perceptions of Employed Graduates, n=142)

Aspect	Positive Shift (%)	Neutral (%)	Negative Shift (%)
Productivity & Efficiency	85	12	3
Work-Life Balance (Automation of Routine Tasks)	68	22	10
Skill Obsolescence Risk	12	25	63
Collaborative Human-AI Environment	79	15	6
Ethical/Job Security Concerns	45	32	23

The data shows that artificial intelligence has greatly improved productivity and efficiency (85%) and strengthened collaborative human-AI environments (79%), indicating better performance and teamwork. Work-life balance has also improved (68%) due to automation of routine tasks, reducing employee workload. However, a major concern is the high negative perception of skill obsolescence (63%), reflecting fear of outdated skills among employees. Ethical and job security concerns show mixed responses, with a significant portion remaining neutral (32%), indicating uncertainty. Overall, AI brings efficiency and convenience but also creates challenges related to workforce adaptability and security.

Table 7: Challenges in AI Skill Integration (Ranked by Respondents)

Challenge	% Ranking as Major
Lack of Infrastructure in Colleges	55
Cost of AI Training	48
Faculty Expertise Gaps	42
Rural Access Barriers	38

The data highlights that the lack of infrastructure in colleges (55%) is the most significant challenge in adopting AI, indicating inadequate technological facilities. The high cost of AI training (48%) is another major barrier, limiting accessibility for many institutions and students.

Faculty expertise gaps (42%) further restrict effective implementation, as educators may lack the required technical knowledge. Rural access barriers (38%) also contribute to inequality in AI adoption, especially in less developed regions. Overall, these challenges indicate that both financial and infrastructural limitations hinder the effective integration of AI in education.

Findings

1. The data reveals that most respondents are young undergraduate students who already have exposure to AI training.
2. Respondents demonstrate the highest awareness in Chat GPT/Generative AI and the lowest in Marketing Analytics tools.
3. Strong positive correlations ($r = 0.948$ to 0.991 , significant at 1% level) exist among all AI awareness factors, indicating that awareness of one AI tool is highly associated with awareness of others, forming a unified AI competency among commerce graduates in Belagavi District.
4. The highest improvement is seen in financial and reporting-related skills, while ethical AI decision-making shows the least improvement.
5. AI skills have the strongest impact on improving interview success and job placement rates.
6. AI enhances productivity and collaboration but increases concerns about skill obsolescence.
7. Inadequate infrastructure and high training costs are the primary barriers to AI adoption in education.

Suggestions

1. Provide AI training programs to students who have not yet received exposure.
2. Provide focused training on less familiar AI areas like marketing analytics to improve overall awareness.
3. Commerce colleges in Belagavi should introduce an integrated AI training module covering Chat GPT, Data Analytics, Accounting Automation, and Marketing Analytics together from the B. Com level to develop holistic AI competency and prepare graduates for the AI-driven corporate environment.
4. Increase focus on training in ethical AI decision-making to balance skill development.
5. Enhance AI-based training to further improve salary outcomes and overall employability.
6. Organizations should implement continuous training and reskilling programs to help employees adapt to AI-driven changes and reduce job insecurity.
7. The government and institutions should invest in infrastructure development and provide affordable AI training programs along with faculty skill enhancement initiatives.

Conclusion

Artificial Intelligence has emerged as a powerful catalyst in enhancing the employability of commerce graduates in Belagavi District by improving technical competencies, productivity, and workplace efficiency. The study confirms that AI-driven skills significantly contribute to better job opportunities, higher interview success rates, and improved corporate performance. At the same time, challenges such as skill obsolescence, ethical concerns, and limited access to AI infrastructure highlight the need for balanced and inclusive development strategies. Educational institutions must integrate AI-focused curricula and practical training, while policymakers should ensure affordable access and infrastructure support. Continuous reskilling and collaboration between academia and industry are essential to prepare graduates for the evolving digital economy. In conclusion, AI not only enhances employability but also demands proactive adaptation, making it crucial for stakeholders to adopt a forward-looking approach for sustainable growth and competitiveness.

References

- [1] Bajpai, A., & Tiwari, S. (2025). Transforming employment: The AI & automation era. *Journal of Social Review and Development*.
- [2] Gupta, S., & Ansari, M. (2023). The influence of employability skills on quality of employment: Evidence from management graduates in India.
- [3] Jathan, P. M. (2025). The influence of AI and automation on commerce curriculum in Indian universities. *Journal of Emerging Technologies and Innovative Research*, 12(7). <https://www.jetir.org/papers/JETIR2507287.pdf>
- [4] Kumar, D. A. (2025). Impact of artificial intelligence on the future of employment in India. SSRN.
- [5] Mishra, K., & Srivastava, A. (2024). Impact of artificial intelligence (A.I.) on employment of Indian workers. *International Journal for Multidisciplinary Research*, 6(5). <https://www.ijfmr.com/papers/2024/5/26417.pdf>
- [6] Sharma, R. (2026). A study on the awareness and usage of AI tools and their impact on employability skills among commerce graduates. ResearchGate.
