



Interdisciplinary Approach in Commerce Education: Integrating Finance, Technology, and Data Analytics for Enhancing Employability Skills

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Abstract-This study investigates the impact of finance, technology and data analytics-based interdisciplinary learning on employability skills of commerce students. Based on the Primary data submitted by 200 students, faculty and professionals from industry, the study evaluates job readiness, digital literacy, analytical skills, etc. and the gap between these with industry requirement. Several analyses were made using Multiple Regression, Kruskal-Wallis H Test, Mean Gap Analysis, and Thematic Analysis. Results show that job readiness and employability can be enhanced through interdisciplinary learning. Despite the education, students still feel unprepared for work life especially in the context of technical, digital & analytical skills. Stakeholders also noted the need for stronger digital skills, realistic exposure, soft skills development and industry collaboration. Traditional commerce education is no longer enough to

meet current workforce requirements, the study found. It suggests to adopt a more interdisciplinary and skill-based approach to better equip graduates for changing careers.

Keywords: Data Analytics, Interdisciplinary Learning, Employability Skills.

1 Introduction

The continuous transformation of technology and data-driven decision making is changing the business and trade in a dynamic global economy. Relying mainly on theoretical framework of commerce does not fulfil the present-day demands of employers. As per them students have to be equipped with multidisciplinary skills along with subject knowledge.

In order to improve the significant changing environment of commerce education with technology, data analytics, and finance. The students learn critical thinking, problem solving and application-based learning through this interdisciplinary approach. Moreover, it makes students digitally literate and develops analytical capabilities to analyses financial data and make business decisions.

The expectation of commerce graduates has risen due to the growth of the fintech and business analytics sectors. Today's graduates need to possess the ability to analyses data, use technology and apply financial knowledge in practice. This calls for a skills-based, industry-supported educational process.

To support better academic learning of commerce as per industry expectation, we have to make it interdisciplinary. Educational education institutions can strengthen students' capabilities and job preparedness by introducing technology, finance, and data analytics into the curriculum. The purpose of study is to evaluate the impact of this integration on the employability and skills of commerce students.

2 Review of Literature:

Barman (2025) The study highlights the value of multi-subject learning for critical thinking skills and flexibility. The study results propose that educational institutions must enhance these skills to make students career ready and employable. Kavitha and Naveen, (2026) According to the research, it is important to ensure effective use of AI in education by overcoming the challenges of a lack of technical knowledge, over-reliance on AI, and data privacy concerns. Omenefu Atabo Reuben, Akeem Olarewaju Salami and Micheal Elikwu (2026) The focused study impacts the skill development of youth for employment and economic development. It emphasizes the importance of both technical and soft skills for youth. Zain, F. A. M., Abdullah, W. A. W., Jaffar, R., & Shaharuddin, S. (2026) Study recommends improvements to the curriculum for employability and sustainable. The recommendation of the study is to early inclusion of this skill on the curriculum. Kercher, K. Todd, J. Gill, C. and Bennett, D. (2024). The study emphasizes that employability skills are key in accountancy education. Students lack communication, emotional intelligence and ethics skills, it says. The recommendation of the study is to early inclusion of this skill on the curriculum.

3 Statement of Problem

The commerce students are being taught knowledge and skills which are of little use to an employer. These students need to be digitally literate and knowledgeable in analytics and other fields. This contradiction makes it difficult for one to get a job in fields like business analytics and fintech. The study examines how all this influences one's willingness to become employed.

4 Objectives

- To assess the impact of interdisciplinary learning (finance, technology, and data analytics) on students' employability readiness.
- To evaluate the role of digital literacy and data analytical skills in enhancing financial decision-making and job readiness among commerce students.
- To analyse the gap between students' skills and industry expectations in interdisciplinary, analytical, and job-ready abilities, particularly in emerging fields like fin-tech and business analytics.
- To explore stakeholder perspectives (students, faculty, and industry) on improving interdisciplinary learning for better employability outcomes.

5 Scope of the Study

The study aims to investigate the digital skills, data analysis capabilities and financial knowledge on employability readiness of commerce students. The study investigates the skill levels, perceptions, and career preparedness in the fields of finance, fintech and business analytics so, by collecting primary data through questionnaires from a selected sample.

6 Research methodology

6.1 Sampling Technique

The study participants were chosen using non-probability, convenience, sampling. When selecting participants, their availability and interest to participate were considered. This is quite a simple but effective way of gathering information from industry and students.

6.2 Research Design

Through this study using quantitative approach, it is examined at how multidisciplinary learning impact employability preparation. Data was collected once from industry, academia and students using structured questionnaire. The uses of mean values and Multiple Linear Regression are discussed to analyses impact. The study is cross-sectional because data was collected at one time.

6.3 Data Collection

For the analysis the primary data were obtained by fill-up the structured questionnaire prepared. The questionnaire is filled by a sam-

ple of 170 peoples, including students, faculty members, industrialists, etc. The questionnaire had close-ended type questions using a Likert scale to assess perceptions and opinions.

6.4 Research Gap

The available literature only focuses on soft skills, AI tools, and interdisciplinary learning with little to no attention given to their impact on employability. The assessment of finance, technology, and data analytics for improving the jobs readiness of commerce students is less explored. Also, not enough research exists on how digital literacy and analytical skills jointly influence financial decisions. There is a gap between what industry needs, mainly fintech and analytics, and what academics teaches. Additionally, input from students, faculty, and industry is greatly lacking.

6.5 Tools used for Analysis

The quantitative tools involved mean analysis, regression analysis, the Kruskal – Wallis H Test, and mean gap analysis. Qualitative analysis involved thematic analysis of the data that helped bring out important patterns and themes.

Data Analysis

Table 1. Multiple Linear Regression Results and Descriptive Statistics (Mean) of Stakeholder Perceptions

Responses	Factors	Mean	Factor	Students (Regression Co-efficient)	P-Value
Students	I still need more practical exposure for careers	3	Curriculum	0.267	0.0017
Students	My course helps me build basic finance skills.	2.9	Integration Ability	0.427	0.000002
	My digital literacy improves my employability.	2.9	Digital Skills	0.17	0.072
	I understand finance and technology integration at a basic level.	2.9	Basic Course Skills	-0.063	0.545
	I feel ready to enter the job market with required interdisciplinary skills.	2.8	--	--	--
	It makes students more job-ready and industry-relevant.	4	--	--	--
Faculty	The curriculum gives partial preparation for interdisciplinary skills.	2.5	--	--	--
Faculty	The teaching approach supports skill development partially.	2.8	--	--	--
Industry	Interdisciplinary integration makes students more job-ready and industry-relevant.	3.7	--	--	--

Industry	Interdisciplinary skills strongly influence hiring decisions for commerce graduates.	3.5	--	--	--
Industry	Current commerce graduates partially meet industry expectations in interdisciplinary competencies.	3.3	--	--	--
Industry	Candidates with interdisciplinary skills are preferred over traditional commerce graduates.	2.8	--	--	--

The Multiple linear regression along with descriptives statics analysis of Table- 1 results show that integration ability, $\beta=0.427$, $p < 0.001$, has the most significant and the strongest positive influence on student’s job readiness, followed by curriculum support, $\beta=0.267$, $p=0.0017$, which is significant as well. On contrary, digital skills, $\beta = 0.17$, $p = 0.072$, have a positive but insignificant impact; basic course skills, $\beta = -0.063$, $p = 0.545$, have a negative and insignificant impact. Therefore, conventional knowledge is not enough to improve employability. The result of descriptive analysis of Table-1 shows that students report moderate readiness, mean = 2.85, faculties perceive higher readiness, mean = 4.0, and the industry also has high expectations, mean = 3.7. This gap highlights how the students’ capabilities are mismatched with industry

needs and strengthens the need for interdisciplinary and practical skills.

6.6 Analysis of Differences in Student, Faculty, and Industry Perceptions of Digital Literacy and Data Analytical Skills in Commerce Students' Job Readiness and Financial Decision-Making

Table 2. KRUSKAL-WALLIS H TEST

Re-sponses	Factors	Mean	kruskal-wallish test		
			grou p	N	Sum of Ranks
Students	I am confident in using digital and analytical skills required in modern finance jobs.	2.7	Stu- dents	5	45
	I am able to apply data analysis skills to solve real-world financial problems.	2.8	Fac- ulty	2	34
	My learning experience has improved my financial decision-making skills using data.	3	In- dus- try	3	33
	I believe digital and analytical skills are important for commerce students today.	3.5	To- tal	10	---
Faculty	My teaching supports data-driven financial decision-making skills.	3.3	---	---	---
	Digital literacy supports students' financial analytical skills.	3.6	---	---	---
Industry	Digital literacy influences graduates' financial analytical ability at work	3.4	---	---	---

Hands-on data analytics training improves job readiness.	3.3	---	---	---
Graduates apply financial knowledge with technology and analytics in practice	2.9	---	---	---

$$H = (12 / N (N + 1)) \times [(R_1^2 / n_1) + (R_2^2 / n_2) + (R_3^2 / n_3)] - 3(N + 1)$$

The Kruskal–Wallis H Test Table -2 analyses the difference between opinions of students, faculty and industry on digital literacy and analytical skills. The findings exhibit different distributions in ranks, whereby a sum of ranks of 45 was found in students and 34 in faculty and 33 in industry. The students are likely to rate these skills differently than faculty and industry do. There is a divergence between student, faculty and industry perspectives in relation to the expected level of confidence and awareness of students. In general, the variation in ranks signifies that there is some difference in perception among the three groups. The highlights from the Table -2 are that there is no complete correlation in the impact of digital and analytical skills on job readiness and financial decision-making.

6.7 Analysis of the Disparity Between Students' Skills and Industry Expectations in Interdisciplinary, Analytical, and Job-Ready Abilities in Emerging Fields like Fintech and Business Analytics

Table 3.1 Mean Gap Analysis

Responses	Factors	Mean
Students	My curriculum prepares me for emerging careers like fintech and business analytics.	2.9
Faculties	The curriculum and industry expectations differ in developing interdisciplinary skills.	2.3
Industrialist	Commerce graduates meet industry expectations in interdisciplinary competencies.	3.3
	Commerce education fails to meet industry expectations in analytical skill development	3.2

Table 4.2 Gap analysis

Dimension	Students mean (perception)	Faculty	Industry	gap (s – i)
		Mean (Curriculum View)	Mean (Expectation)	
Digital & Analytics Skills, Financial Decision Skills	2.91	2.33	3.25	-0.34
Job Readiness Skills, Technical & Interdisciplinary Skills.				

Table 5.3 Mean Gap Analysis

Item	Meaning
– 0.339	Indicates a small to moderate skill gap
Industry higher	Shows mismatch between curriculum and industry expectations
Students lower	Highlights need for skill improvement

Mean Gap Analysis: Gap = Students Mean-Industry Mean

(Table -3.1) Means:

- Student mean =2.91
- Industry mean=3.25

Now subtract: $2.91-3.25= -0.339$

The Mean Gap Analysis of Table-3.2 indicates that the students rated their skills at 2.91; and for students and industry expectations-is at 3.25, indicating a -0.339 gap. There is a small to moderate gap between the possession of these skills by students and what the industry expects. This is true for digital, analytical and computational and interdisciplinary skills. The industry mean is higher, which indicates stronger expectations than the mean score of the students, which shows students’ unpreparedness for job readiness. This mismatch shows that present day’s curriculum is only partially adequate for job preparedness. Table-3.3 implies that there is need to boost development of practical, technical, and interdisciplinary skills for industrial needs.

6.8 Analysis of Stakeholder Perspectives (Students, Faculty, and Industry) on Improving Interdisciplinary Learning for Better Employability Outcomes

Table 6. Thematic Content Analysis

Sl. No	Responses	Theme	Suggestions	Frequency
1	Students, Faculty, Industry	Digital & technical skills	R, SQL, AI, ML, Power BI, Tableau, blockchain, cloud computing	85–90 responses
2	Faculty, Industry	Interdisciplinary learning	Integration of finance with technology and data analytics	25–30 responses
3	Students, Faculty, Industry	Practical exposure	Internships, live projects, case studies, simulations, hackathons	70–75 responses
4	Faculty, Industry	Industry collaboration	Guest lectures, training programs, company tie-ups, live projects	30–35 responses
5	Students, Faculty, Industry	Soft-skills development	Communication, teamwork, problem-solving, critical thinking, adaptability	60–65 responses
6	Students, Faculty, Industry	Career-readiness & lifelong learning	Certifications, continuous learning, staying updated with trends	40–45 responses

Thematic Analysis of Table-4 indicates that the stakeholders have priority for digital and technical skills, with stakeholders giving 85–90 responses for digital or technical skills. Further, it is followed by practical exposure as 70–75 response are given on it which is also not an unworthy life skill – practical exposure. Finally, examiners give 60–65 responses indicating soft skills are also the areas of focus of stakeholders of the program. The employability that stems from career readiness and constant learning, 40–45 responses, and industry collaboration, 30–35 responses, are two key elements after interdisciplinarity skills integration, 25–30 responses. Stakeholders across the board underscore a balanced emphasis on technical, practical and soft skills. According to the Table-4 Higher education requires stronger interdisciplinary learning and industry linkage to meet future job demands.

7 Findings

- Students feel only somewhat prepared for professional life while teachers are confident of their readiness and employers steadily expect these competencies to be at a higher level as per the report.
- The employability of students will greatly increase with the use of use of technology and data analytics in addition to commerce education as only traditional methods of teaching are not enough. However, there is a clear perception gap among students, teachers and employers regarding the readiness and skill level of the students.

- An apparent gap between students' skills and industry expectations has surfaced, underlining the need for prioritizing technical/digital skills, practical exposure, and soft skills development in the education sector.

8 Suggestions

Institutions should make internships, live projects and industry-based case studies compulsory for students to give them first-hand experience. The curriculum should be relevant to the industry standards. The curriculum must be updated in consultation with the industry to include the relevant skills. Skills like data analytics, usage of AI tools, fintech applications, etc. must be included in the curriculum. It is essential for the universities to have industry partnership cells for guest lectures, workshop and skill certifying programs. Before graduation, students must go through compulsory skill testing and competency mapping to enable them find a job. Along with hands-on experience in tools like Excel, Power BI, Python, soft skills labs to enhance communication, teamwork, problem-solving skills should also form part of the training.

9 Conclusions

The disparity between students' perception of their employability, teacher's assessment and what employers look for is significant as found in the study. Clearly traditional business education alone is not a sufficient approach. Applying technology alongside data analysis or hands-on learning for making people much more likely to get a job. The findings further revealed that school leavers and

policymakers are not well-connected to the skills required for employment, resulting in a gap in marketable skills such as soft, technical, and digital ones. To bridge this divide, we must constantly revise the curriculum, engage with business sectors and provide students with opportunities for hands-on learning. In order to make commerce graduates more work-ready, it is important to make education more interdisciplinary and skill-based.

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