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**Artificial Intelligence in Sustainable Accounting: Shaping the Future  
Careers of Commerce Students with Special Reference to Chennai City**

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Peer Review Information	Abstract
<i>Submission: 11 Jan 2026</i>	<p>The transformation from traditional financial practices have redefined the educational career for Commerce students. Sustainable accounting emphasizes on environmental governance and social governance in financial reporting while using AI to enhance efficiency and accuracy. This study is an attempt to explore how AI technologies contribute to sustainable accounting practices and how AI technologies are shaping the future careers of commerce students. AI has now emerged to be a tool for data automation, analysis and interpretation for large data sets and contributes a great input for decision making. It assists in identifying pitfalls and enables their rectification and upgradation. It has now become the need of the hour that the students who want to choose their career in this field, should equip themselves with the technology to find their position in the job market. The technology provides them the platform for specialisation in financial analysis and reporting. The integration of AI in sustainable accounting is just not a advancement of technology but a paradigm shift influencing how commerce students envision their career path. By integrating technological advancements and sustainability objectives into academic learning, educational institutions can equip future accountants to serve as strategic contributors to corporate sustainability and innovation. This study highlights the crucial role of Artificial Intelligence in cultivating a new generation of accounting professionals dedicated to ethical, responsible, and data-driven financial practices.</p>
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**Introduction**

The world of commerce is undergoing a major transformation. Traditional accounting practices that relied heavily on manual work and paper records are now being replaced by smart, digital systems. Among these innovations, Artificial Intelligence (AI) stands out as one of the most powerful forces reshaping accounting and finance. At the same time, there is a growing global demand for sustainability—conducting

business in ways that protect the environment, conserve resources, and promote long-term economic stability.

When we combine these two ideas—AI and sustainability—we get Sustainable Accounting, a modern approach that not only improves financial accuracy but also supports responsible, eco-friendly business operations.

For today's commerce students, understanding this transformation is essential. The accountants

and managers of tomorrow will need to use technology responsibly, think sustainably, and make ethical decisions supported by data and automation.

### Review of Literature

1. Country-level analyses (e.g., India) reveal that firms using AI and advanced analytics tend to report stronger ESG disclosure practices. These papers combine firm-level ESG scores with proxies for AI adoption and report improvements in disclosure quality and stakeholder transparency. However, authors note heterogeneity across firms (size, industry, regulatory environment) and call for research on how AI adoption affects career skill requirements for accounting graduates in emerging economies.

- Recent studies show that AI significantly improves sustainability reporting by automating data collection, enabling real-time ESG monitoring, and integrating heterogeneous data sources for greener decision-making. Researchers argue AI reduces manual effort and increases the accuracy and timeliness of environmental disclosures, helping firms measure carbon footprints and other sustainability indicators more reliably. However, work so far is largely conceptual or based on case studies; empirical evidence on long-term impacts across sectors remains limited.

2. Joan Ballantine, Gordon Bayce, Greg Stoner, March 2024, paper titled "A critical review of AI in accounting education: Threat and Opportunity" - Scholars reviewing accounting pedagogy emphasize that AI is forcing a curriculum shift — from rote bookkeeping to data analytics, interpretive skills, and ethical reasoning. Critical reviews highlight both opportunities (improved learning, automation of routine tasks) and threats (plagiarism, deskilling if curricula lag). The literature calls for integration of AI tools and teaching of core competencies such as basic machine-learning literacy and data governance in commerce programmes. Still, empirical studies measuring learning outcomes after curricular changes are few.

3. Prabin Adhikari, Prashamsa Hamal and Francis Baidoo J, International Journal of Science and Research Archive, August 2024, paper titled "Artificial Intelligence in fraud detection: Revolutionizing financial security" - Systematic reviews indicate AI methods (anomaly detection, neural networks, NLP on textual disclosures) outperform traditional techniques for spotting irregularities and potential fraud in large transactional datasets. Studies report reduced detection time and improved sensitivity to complex fraud patterns, though they also flag

challenges like false positives, model interpretability, and data quality. The literature recommends hybrid human-AI workflows but notes a shortage of research on adoption barriers in small and medium enterprises.

4. Arvind Nain, Narendra S Bohra, Vasim Ahmad, 2024 International Conference on Communication, Computing and Energy Efficient Technologies, paper titled "AI-Driven Green Accounting for Sustainable Development" - Empirical research (panel and firm-level studies) finds a positive association between AI adoption and firms' green total factor productivity — suggesting AI can help firms use resources more efficiently and lower environmental externalities. These studies often combine econometric models with measures of digital adoption to show AI's contribution to sustainable operational performance. Limitations include country/sector concentration (many studies focus on large listed firms) and endogeneity concerns that future research should address.

5. AK Mohapatra, 2024, paper titled "AI and ESG Reporting – Evidence and Emerging Markets" - Country-level analyses (e.g., India) reveal that firms using AI and advanced analytics tend to report stronger ESG disclosure practices. These papers combine firm-level ESG scores with proxies for AI adoption and report improvements in disclosure quality and stakeholder transparency. However, authors note heterogeneity across firms (size, industry, regulatory environment) and call for research on how AI adoption affects career skill requirements for accounting graduates in emerging economies.

### Objectives of the Study

- To understand the concept of sustainable accounting and its relevance in modern business.
- To explore how Artificial Intelligence supports sustainability in accounting.
- To highlight the career opportunities for commerce students in the field of AI-driven sustainable accounting.
- To discuss the challenges and ethical concerns in using AI for financial decision-making.

### Concept of Sustainable Accounting

Sustainable accounting extends far beyond the traditional concept of measuring profits. It adopts a holistic approach that evaluates the broader impact of business operations on society, the environment, and the economy. Rather than focusing solely on financial performance, sustainable accounting integrates ethical and ecological dimensions into financial reporting.

At its core, this approach emphasizes the efficient use of resources and the reduction of waste—particularly in areas such as paper consumption, energy usage, and raw materials. It involves assessing and monitoring carbon footprints, tracking sustainability indicators, and identifying the environmental costs associated with business activities. Moreover, sustainable accounting gives importance to Corporate Social Responsibility (CSR), ensuring that companies remain accountable not only to shareholders but also to the wider community and the planet.

In essence, sustainable accounting seeks to achieve a balanced relationship among the three key pillars of sustainability—**People, Planet, and Profit**. This “triple bottom line” perspective encourages businesses to create long-term value that benefits both the economy and the environment while upholding social equity.

Traditionally, accounting systems were designed to capture and report only financial transactions, such as revenues, expenses, and profits. However, the modern business environment demands greater transparency and accountability. Organizations are now expanding their accounting frameworks to include non-financial data, such as greenhouse gas emissions, energy consumption, waste management, employee welfare, and community engagement. These insights are often compiled into sustainability reports, which complement traditional financial statements by providing a comprehensive view of an organization’s overall performance.

Through sustainable accounting, businesses not only comply with global sustainability standards but also demonstrate their commitment to responsible governance, environmental stewardship, and social well-being—ultimately fostering trust among stakeholders and contributing to a more sustainable future.

### Role of Artificial Intelligence in Sustainable Accounting

Artificial Intelligence introduces advanced automation, data analysis, and predictive insights into accounting. Here’s how AI promotes sustainability in accounting practices:

- **Paperless Accounting**  
AI-based systems like cloud accounting reduce paper use by automating data entry, invoices, and reports—saving both time and trees.
- **Energy and Resource Efficiency**  
AI tools optimize energy use in accounting departments by managing data storage and computation efficiently.
- **Fraud Detection and Accuracy**  
AI algorithms identify errors and

fraudulent activities faster than humans, ensuring ethical financial practices.

- **Sustainable Financial Decision-Making**  
AI analyzes environmental and social data along with financial data, helping businesses make decisions that are both profitable and eco-friendly.
- **Predictive Analysis for Future Sustainability**  
AI can predict long-term environmental and financial risks, helping organizations plan responsibly.

### Benefits for Commerce Students

- **Career Readiness**  
Students with AI and sustainability knowledge will have an edge in accounting, finance, auditing, and business analytics careers.
- **Skill Development**  
Learning to use tools like QuickBooks AI, Zoho Books, Xero, SAP, and Power BI enhances technical competence.
- **Ethical Awareness**  
Exposure to AI-based decision systems helps students understand ethical accounting—reducing bias and promoting transparency.
- **Entrepreneurial Opportunities**  
AI can assist students in launching startups that promote digital and eco-friendly business models.

### Challenges in Implementing AI for Sustainable Accounting

While AI brings several advantages, it also raises challenges such as:

- High implementation cost and lack of access to advanced software in smaller institutions.
- Data security and privacy issues in cloud-based systems.
- Skill gap among students and educators regarding AI tools.
- Ethical concerns, including algorithmic bias or misuse of automation.
- To overcome these, colleges must promote AI literacy, ethical awareness, and sustainability education within commerce programs.

### Role of Educational Institutions

Colleges can play a crucial role in preparing students for the future by:

- Integrating AI and sustainability modules into the commerce curriculum.
- Organizing workshops and certification courses on digital accounting tools.

- Encouraging research and student projects on green accounting and digital ethics.
- Collaborating with companies that use AI for sustainable finance practices.

### Research methodology

This is empirical research for which data was collected through a questionnaire. A random sampling method was used in selecting respondents. Around 118 responses were collected and used in the study. The researcher has used frequency distribution, Weighted Average and the Chi-square test for the analysis. Secondary data for the study are collected from journals, newspapers, magazines and e-resources.

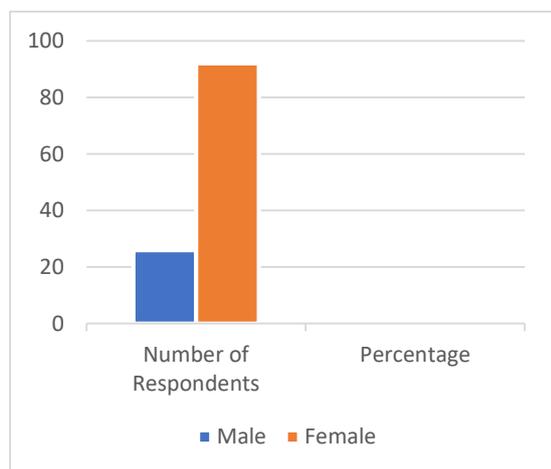
### Data Analysis and Interpretation

#### Frequency Distribution

##### 1. Gender distribution of respondents

**Table 1.1** Table showing frequency distribution on the gender of respondents

Gender	Number of Respondents	Percentage
Male	26	22.03%
Female	92	77.97%
Total	118	100%

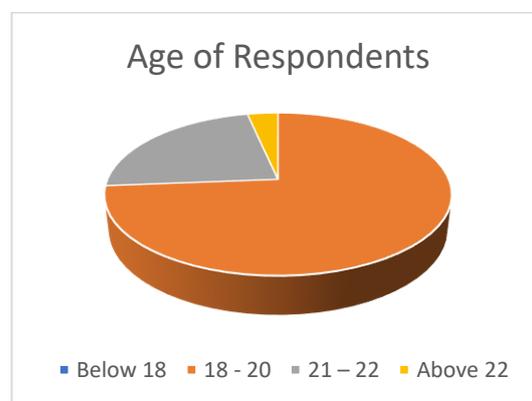


The analysis shows that more than 75% of the respondents are female. 26 male respondents and 92 female respondents are taken for the study.

##### 2. Age of various respondents

**Table 1.2** Table showing frequency distribution on the age of the respondents

Age	Number of Respondents	Percentage
Below 18	0	0%
18 - 20	87	74%
21 - 22	27	23%
Above 22	4	3%
Total	118	100%

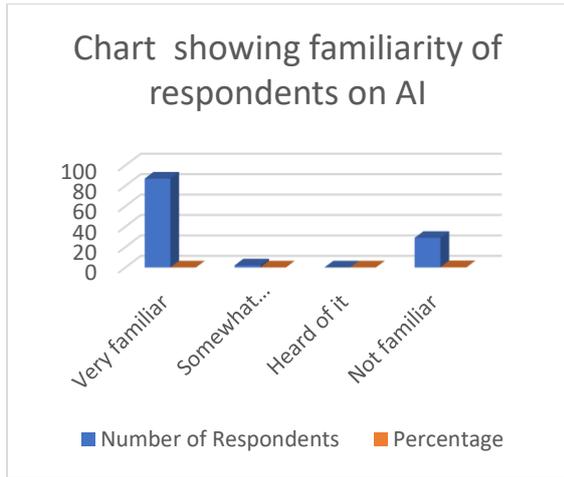


The analysis reveals that the respondents belonging to the age group of 18 - 20 forms the majority. Respondents belonging to the age group of 21 - 22 are 27, above 22 are 4 and that of less than 18 are NIL.

##### 3. Familiarity of AI applications in Accounting or Finance among various respondents

**Table 1.3** Table showing frequency distribution of Familiarity of AI applications in Accounting or Finance

Opinion	Number of Respondents	Percentage
Very familiar	87	1.69%
Somewhat familiar	2	3.71%
Heard of it	0	0.00%
Not familiar	29	24.58%
Total	118	100%



The analysis shows that the respondents have high familiarity of AI application in accounting or finance. Around 24.58% of the respondents are only not familiar.

**Weighted average method**

1. Perception of respondents on AI in sustainable accounting

**Table 1.4** Table showing weighted average Perception of respondents on AI in sustainable accounting

Perception	Number of Respondents					Weighted Average
	SDA	DA	N	A	SA	
AI can help reduce paper usage and support green accounting practices.	6	6	19	58	29	3.83
AI will create new career opportunities for commerce students.	9	12	38	38	21	3.42
AI can help detect frauds and improve ethical standards in accounting.	6	6	32	56	18	3.63
Learning AI tools should be made part of the college commerce curriculum.	2	9	26	50	31	3.84
AI can help organizations balance profit with environmental and social responsibility.	4	4	27	71	12	3.70

**Interpretation**

All statements have weighted averages above 3, indicating overall agreement among respondents. The highest agreement is seen for integrating AI tools in the commerce curriculum and using AI for sustainable accounting practices. The second highest is seen for AI can help reduce

paper usage and support green accounting practices.

**Chi-Square Analysis**

1. Relationship between gender of Respondents and familiarity of AI application in accounting or finance.

**Null hypothesis:** There is no significant association between respondents' gender and familiarity with AI applications in accounting or finance.

**Alternate hypothesis:** There is a significant association between respondents' gender and familiarity with AI application in accounting or finance.

**Table 1.5** Table showing Marital Status and Financial Challenges

Gender	Very familiar	Somewhat familiar	Hard of it	Not familiar	Total
Male	4	14	8	0	26
Female	24	47	17	4	92
Total	28	61	25	4	118

### Interpretation

The p-value (0.310) is greater than 0.05, which means the result is not statistically significant at the 5% level. The researcher rejects the null hypothesis and concludes that there is no significant association between respondents' gender and familiarity with AI applications in accounting or finance. This indicates that any differences observed between male and female respondents' familiarity levels are likely due to random variation rather than a real underlying difference between genders.

### Findings of the study

- The analysis shows that more than 75% of the respondents are female. 26 male respondents and 92 female respondents are taken for the study.
- The analysis reveals that the respondents belonging to the age group of 18 - 20 forms the majority. Respondents belonging to the age group of 21 - 22 are 27, above 22 are 4 and that of less than 18 are NIL.
- The analysis shows that the respondents have high familiarity of AI application in accounting or finance. Around 24.58% of the respondents are only not familiar.
- All statements have weighted averages above 3, indicating overall agreement among respondents. The highest agreement is seen for integrating AI tools in the commerce curriculum and using AI for sustainable accounting practices.
- The researcher rejects the null hypothesis and concludes that there is no significant association between respondents' gender and familiarity with AI applications in

accounting or finance. The study indicates that any differences observed between male and female respondents' familiarity levels are likely due to random variation rather than a real underlying difference between genders.

### Conclusion

Artificial Intelligence is not just transforming accounting—it is reshaping how we think about responsibility, transparency, and sustainability in business. For commerce students, understanding AI-driven sustainable accounting means more than learning technology; it means preparing for a future where accountants are guardians of both financial and environmental integrity. By embracing these new tools and values, students can become pioneers of a smarter, greener, and more ethical economy.

### Bibliography

Ayesha Tariq, Mohd Reyaz Ur Rahim, December 2024, says in their paper AI in sustainability reporting and Green accounting

Joan Ballantine, Gordon Bayce, Greg Stoner, March 2024, paper titled "A critical review of AI in accounting education: Threat and Opportunity"

Prabin Adhikari, Prashamsa Hamal and Francis Baidoo J, International Journal of Science and Research Archive, August 2024, paper titled "Artificial Intelligence in fraud detection: Revolutionizing financial security"

Arvind Nain, Narendra S Bohra, Vasim Ahmad, 2024 International Conference on Communication, Computing and Energy Efficient Technologies, paper titled "AI-Driven Green Accounting for Sustainable Development"

AK Mohapatra, 2024, paper titled " AI and ESG Reporting - Evidence and Emerging Markets"

Alruwaili, T. F. (2025). The impact of artificial intelligence on accounting practices. *Nature Humanities & Social Sciences Communications*.

Ballantine, J. (2024). A critical review of AI in accounting education: Threats and opportunities. *Journal of Accounting Education*.

Areiqat, A. Y., & Jaber, H. A. N. (2025). AI and Sustainable Accounting: Balancing Innovation and Responsibility. *Journal of Management World*, 2025(3), 10-16.

Giudici, P. (2025). Sustainable artificial intelligence in finance: Impact of ESG and accounting practices. PMC (PubMed Central).

Peng, Y. (2023). Riding the waves of artificial intelligence in advancing sustainable accounting and auditing. *Sustainability*, 15(19), 14165.