The Role of Dashboard Reporting Skills in Managerial Accounting for Enhancing Business Profitability: A Study of Academic Perceptions

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Abstract

This study explores the role of dashboard reporting skills in managerial accounting and their perceived impact on enhancing business profitability from the perspective of academic professionals. In response to the increasing reliance on data visualization tools such as Power BI and Tableau in financial decision-making, this research investigates whether current accounting education effectively prepares graduates with such competencies. Employing a quantitative approach, data were collected from 44 faculty members at Salahaddin University in Erbil, Iraq. Descriptive statistics, Pearson correlation, and regression analysis were conducted to examine the relationship between perceived dashboard reporting skills and their influence on business profitability.The results reveal a strong academic consensus on the importance of dashboard competencies, with an agreement rate of 78.90%. A significant positive correlation ($r = 0.738$, $p < 0.001$) was found between dashboard skills and perceived profitability outcomes. Furthermore, regression analysis demonstrated that dashboard skills significantly predict perceptions of profitability ($R^2 = 54.5\%$, $p < 0.001$). However, the findings also indicate uncertainty regarding the integration of these tools into accounting curricula.

The study concludes that bridging the skills gap through curriculum reform, hands-on training, and continuous professional development is essential to align academic preparation with modern business requirements. Recommendations include embedding dashboard tools into accounting education, enhancing university-industry collaboration, and conducting further empirical research to support data-driven decision-making in management accounting.

Keywords: Managerial Accounting, Dashboard Reporting, Business Profitability, Accounting Education, Data Visualization, Digital Skills.

Introduction

With the fast pace of the modern digital age shaping the future of management accountants, leading-edge technologies like Artificial Intelligence (AI), blockchain, and Extensible Business Reporting Language (XBRL) have transformed the business of financial reporting, requiring new emerging skill sets far beyond conventional accounting skills. The most critical yet untapped horizon of this revolution might be dashboard reporting, allowing businesses to make instant, fact-driven decisions.In spite of the increasing use of dashboard tools to conduct financial analysis and performance monitoring, there remains a wide literature gap in academia that underscores the significance of dashboard skills in educating management accountants. Research conducted by Sumiyati et al. (2023) and Fernandez and Idris (2023) has pointed towards the growing importance of technology in accounting, but there is still an educational deficit in preparing future accountants with the technological and analytical skills needed for financial reporting through dashboards. Not only does this influence the preparedness of graduates to enter the profession, but it also impacts business profitability directly. Without effective dashboard reporting skills, management accountants

can fail to derive important insights, thus making inefficient decisions and opportunities for financial optimization lost (Sumiyati et al., 2023; Fernandez & Idris, 2023).While management accountants become increasingly engaged in strategic roles within organizations, the potential to analyze, visualize, and make sense of financial information through dashboards is as important as their core accounting role. Organizations that do not embrace dashboard-based financial insights risk being saddled with inefficiencies, low competitiveness, and lower profitability. It is with this imperative that the technology skills and theoretical education must be harmonized to enhance real finance decision-making (Sumiyati et al., 2023). This research will strive to examine the view of university scholars on the importance of dashboard reporting skills in management accounting study and examine the possible effect of their absence on the profitability of companies. Through filling this gap, the study will seek to make notable contributions towards the restructuring of accounting courses in a way that equips future professionals with the right skills to deal with the computerized financial environment.

Problem Statement

Despite the digital transformation currently shaping the field of managerial accounting and the growing adoption by many companies of interactive dashboard tools such as Power BI and Tableau to enhance profitability and support decision-making, academic accounting programs still lack a systematic integration of dashboard preparation and analysis skills within their curricula.Recent studies have shown a growing interest among professionals in acquiring these skills, and according to IFAC (2021), accountants must lead the adoption of digital technologies within organizations. however, the perceptions of academic scholars regarding the importance of dashboard reporting skills and their impact on corporate profitability have yet to be thoroughly explored. This reveals a clear gap between the analytical and technological competencies that educational institutions should provide and what is actually being taught, which may negatively affect the ability of graduates to effectively perform their roles as management accountants who contribute to business profitability.Therefore, this study aims to explore academic perceptions of the importance of dashboard reporting skills and to examine the relationship and potential impact of these perceptions on business profitability, as a step toward reshaping accounting education to align with the demands of the modern job market.

Hypotheses

Hypotheses for Correlation Analysis:

1. H_0 (Null Hypothesis): There is no significant correlation between college academics' perceptions of dashboard reporting skills in management accounting and their perceived impact on corporate profitability.
2. H_1 (Alternative Hypothesis): There is a significant correlation between college academics' perceptions of dashboard reporting skills in management accounting and their perceived impact on corporate profitability.

Hypotheses for Regression Analysis:

3. **H_0 (Null Hypothesis):** College academics' perceptions of dashboard reporting skills **do not significantly predict** their perceived impact on corporate profitability.
4. **H_1 (Alternative Hypothesis):** College academics' perceptions of dashboard reporting skills **significantly predict** their perceived impact on corporate profitability.

Research Objectives
This study aims to:

1. **Examine the relationship** between college academics' perceptions of dashboard reporting skills in management accounting and their perceived impact on corporate profitability.
2. **Analyze the correlation and regression** between dashboard skills and profitability to determine whether these skills significantly influence financial decision-making.
3. **Identify gaps** in current accounting education regarding dashboard reporting skills and their alignment with industry needs.
4. **Provide recommendations** for integrating dashboard reporting competencies into management accounting curricula to enhance professional readiness.

Importance of the Research
This study is significant because:

1. **Bridging the Skills Gap:** It highlights the lack of focus on dashboard reporting in management accounting education and its potential impact on business profitability.
2. **Academic Contribution:** It provides empirical evidence on the relationship between dashboard skills and corporate performance, adding value to accounting education research.
3. **Practical Implications:** By identifying key skills needed for dashboard reporting, this study helps shape accounting curricula to better prepare future professionals.
4. **Industry Relevance:** Findings will benefit businesses by emphasizing the importance of hiring accountants with strong dashboard and data analytics capabilities.

This research serves as a **guideline for educators, policymakers, and businesses** in adapting accounting education to meet **technological advancements and industry demands**.

Research Population and Sample:

The research population consists of faculty members in the accounting departments of Salahaddin University in Erbil, Iraq, as they represent a specialized academic group with the knowledge and experience relevant to the subject of the study. A purposive sample was selected from this population, comprising faculty members who have direct interest or research/practical experience in the fields of managerial accounting .The questionnaire was distributed to the sample members during the second semester of the academic year [2025]. The sample included [44] participants out of a total population of [52], resulting in a response rate of [84.6%]. This sample size is considered sufficient to achieve the objectives of the study and to test its hypotheses, in accordance with the requirements of the statistical analysis employed.

Study Limitations and Future Directions

1. **Geographical and Institutional Scope:** The study was limited to academics at Salahaddin University in Erbil, which may affect generalizability. Future research could expand to other universities or regions.
2. **Sample Composition:** Only academic perspectives were included. Future studies could incorporate views from practicing accountants, auditors, or industry professionals.
3. **Data Collection:** The reliance on self-reported questionnaires may introduce response bias. Triangulation with interviews or archival data could strengthen future findings.
4. **Exploratory Focus:** As a preliminary study, it provides initial insights rather than definitive conclusions. Further research should test these findings in broader contexts.

Despite these limitations, this study falls within the scope of exploratory research aimed at establishing an initial framework for understanding the relationship between dashboard reporting skills and profitability. As such, it serves as a foundational step upon which more comprehensive future studies can build—integrating mixed-method approaches (quantitative and qualitative) and linking to broader theoretical frameworks.

1. Literature Review

1.1 Management Accounting

Management accounting has significantly evolved from the traditional duties it performed, i.e., cost accounting and internal financial reporting, to a multidimensional discipline that plays a key role in the derivation of strategies and control of organizational management. Nogueira and Nunes (2023) elaborated that management accounting is highly instrumental in providing tailor-made information in support of managerial functions, enhancing decision-making processes crucial for organizational growth. The shift from merely historic record-keeping and financial reporting to a broader strategic role encompasses performance management, strategic planning, and operational decision-making.In the modern business context, management accounting serves as an essential link between financial data and strategic management, offering insights that aid the decision process. This extends the role of management accounting to provide comprehensive data for economic forecasting and operational decision-making, thus overcoming traditional financial accounting's limitations, especially relevant for activity-based management (Yerzhanov and Taygashinova, 2023). The domain of management accounting now includes various non-financial indicators necessary for strategic and operational planning.Innovation within management accounting practices, according to Arkhipova (2022), involves establishing financial controls and assigning values to non-financial aspects for making informed organizational decisions. Furthermore, Yerzhanov and Taygashinova (2022) describe management accounting as a value-adding process that promotes management action, motivates behavior, and supports organizational goals through the improvement of financial and non-financial information systems. This depiction underlines management accounting's role as part of the management information system, focusing on enhancing organizational strategic alignment and operational efficiency.

1.2 Dashboard Reports

Dashboard reports are a significant advancement in management accounting technology that enables the real-time visualization of data to facilitate quick and informed decision-making. Bernardes and Das Neves (2023) observe the applicability of dashboard reports in enabling organizational continuity and permitting well-informed decisions based on the analysis of financial data. The tools are specifically good at consolidating key financial and business metrics, significantly assisting managers and decision-makers in effectively monitoring organizational performance.Yerzhanov and Taygashinova (2023) recognize dashboard reports as some of the essential components of management accounting, facilitating the preparation of operational information for planning, budgeting, control, and analysis decisions, thus enhancing income generation. Dashboard reports consolidate complex data into easily accessible visual displays, offering real-time feedback on organizational performance, trends, and problem issues.Furthermore, dashboard reports are platforms enhancing information flow and thereby facilitating effective and operational decision-making processes (Yerzhanov and Taygashinova, 2022). This innovation emphasizes the role of real-time analytics and data visualization in strategic decision-making, enhancing transparency and accountability and fostering a data-oriented culture in institutions.

1.3 Contribution of Dashboard Reporting

Dashboard reporting is one of the major innovations in management accounting that has surpassed traditional financial reporting through real-time information based on new data visualization techniques. It provides management accountants with a novel perspective of

organizational performance through a close look into specific and customized information for strategic decision-making (Nogueira & Nunes, 2023). The immediacy of dashboard reporting is indispensable in the current fast-paced business milieu, necessitating swift decisions based on the latest data (Mohammed, 2023).Dashboard reporting emerges as a key tool for agile management and control, as noted by Bernardes and Das Neves (2023), facilitating prompt, efficient, and comprehensive analysis of financial and accounting reports. Dashboards' ability to amalgamate various data sources into a coherent and interpretable visual format ensures continuity in operations and strategic alignments, marking a significant step forward in management accounting practices.Yerzhanov & Taygashinova (2023) further highlight the role of dashboard reporting in providing operational information critical for managerial decisions related to planning, budgeting, control, and analysis. This contribution is instrumental in fostering a culture of data-driven decision-making within organizations, where management accounting plays a central role in navigating through complex business landscapes to enhance income generation and organizational growth.Moreover, dashboard reporting propels the management accounting function into the strategic realm, facilitating real-time access to key performance indicators and data visualizations that empower management accountants to deliver timely insights for strategic, tactical, and operational decision-making (Yerzhanov & Taygashinova, 2022). This strategic contribution is echoed by Moscoso-Paucarchuco (2022), who notes that dashboard reporting provides a structured life cycle of management reporting, aligning user information needs with available data sources and enhancing the effectiveness of financial reporting management systems.

1.4 Role Enhancement of Management Accounting:

The integration of dashboard reporting significantly amplifies the strategic value of management accounting within the enterprise. By providing a comprehensive and real-time view of performance across various dimensions—financial, operational, and strategic—dashboard reports enable management accountants to assume a more proactive role in guiding business strategy and operations (Chyzhevska, 2021).This augmented role is delineated by a transition from conventional record-keeping towards serving as strategic consultants who harness real-time data to shape business strategy and operational effectiveness. Dashboard reporting thus transcends its original role as a basic reporting vehicle to become a strategic device that directs organizational course, allocation of resources, and initiatives to enhance performance.The capacity of dashboard reporting to place both financial and non-financial information in visually engaging formats assists in creating quick and well-informed decision-making habits, thus enhancing the overall efficiency of organizational performance (Konoplina, Mizik, & Chekh, 2020). Such comprehensive perception of performance has a great contribution towards supporting strategic decisions and project implementations, addressing various information needs of stakeholders and reaffirming the fundamental significance of management accounting to the realm of modern business operations.Furthermore, dashboard reporting significantly improves the transparency and accountability of management accounting practices through the provision of timely insights and performance data to boards of directors and top management, which are critical for effective oversight and strategy execution (Massicotte & Henri, 2020). This aspect of accountability becomes increasingly significant in the current business world, where stakeholders demand greater transparency and ethical management practices. A further exploration of the position of dashboard reporting in management accounting explains the vital intersection of technology, data analysis, and strategic planning in contemporary business settings. Management accounting is then an indispensable action that not merely optimizes but also fuels strategic initiatives and organizational accomplishment through the effective application of dashboard reporting.

1.5 Analysis of Dashboard Reporting Integration:

The emergence of dashboard reporting represents a new era in management accounting with growing dependence on real-time data and analytics for decision-making. Alhamdi Mohammed (2023) points out that not only does dashboard reporting improve sustainable financial reporting but also signals the way towards more responsive and dynamic management accounting practices. This shift needs an in-depth understanding of the technical aspect of dashboard reporting software and the strategic acumen to leverage the insights that such tools yield.Song and Lee (2023) identify the key value of information attributes in management accounting systems, such as integration, scope, and aggregation. An example of these attributes par excellence is dashboard reporting, which unifies heterogeneous streams of data into meaningful, readily understandable visualizations. The challenge is how to apply these systems at scale to the specific needs of SMEs, where resource constraints may stand between implementing advanced analytics solutions. Innovative training techniques in management, pointed out by Nivet, Petit, and Falzon (2023), can present a fresh line for filling the skills gap in management accounting. Through simulation of real-life business environments and interactive interaction, dashboard report instruments can be both development and learning tools and sites for developing the strategic decision-making skill of management accountants.

1.6 Addressing the Skills Gap:

The most significant challenges are the competency gap in management accounting, especially dashboard reporting. Moscoso-Paucarchuco (2022) proposes a strategic management accounting framework with dashboard reporting for enhancing decision-making and organizational performance. The framework identifies the necessity for a curriculum that provides comprehensive expertise in data analytics, business intelligence, and strategic financial analysis to management accountants. Meiryani et al.'s (2021) research acknowledges the significance of management accounting information systems in managerial performance. Their finding confirms that effective communication, which is facilitated by dashboard reporting, is critical to enhance decision-making processes and organizational competitiveness. This necessitates collective efforts to formulate and enhance the analytical skills of management accountants to navigate and utilize the functions of dashboard reporting tools. Nanediri, Rajeshwaran, and Epitawalage's (2022) investigation of strategic management accounting practices also corroborates the importance of the incorporation of dashboard reporting to facilitate improved organizational performance. Activity-Based Costing and Balanced Scorecard practices, supplemented by dashboard reporting, allow for better insight into the cost drivers and the performance metrics, facilitating simpler strategic decision-making and competitiveness.

1.7 Practical Implications and Future Directions:

The integration of dashboard reporting into management accounting and closing the skills gap is not only about staying current with emerging technology, but redefining management accountants' role as well. Making the implementation of an extensive training program with hands-on experience in the use of dashboard reporting tools, data analysis, and strategic planning a priority must be the organization's task. Future studies can analyze successful models of dashboard reporting adoption in various industrial environments, pitfalls and best practices of such adoptions, etc. The study can also lay emphasis on creating pedagogical processes to bridge the skills gap in management accounting and thereby prepare the next generation of accountants for the intricacies of a data-driven business environment. In summary, the application of dashboard reporting to management accounting procedures is a breakthrough toward greater dynamism and fact-based decision-making. Bridging the gap in competencies is key to enabling the optimum use of such facilities and entails a complex approach integrating education, training, and organizational strategic planning. By embracing such reforms, management accountants can entrench their strategic contribution significantly and enable organizations' long-term growth.

1.8 In-depth Integration of Dashboard Reporting:

Evolution of management accounting with the integration of dashboard reporting is a milestone to leverage technology for strategic decision-making. Alhamdi Mohammed (2023) and Bernardes and Das Neves (2023) provide illustrations of work where dashboard reporting outshines traditional conventions of financial reporting. Dashboards are the driving forces behind achieving real-time analytics, which simplifies it for management accountants to tread through huge data sets without any resistance, thus further enhancing financial and operating decision-making protocols. Yerzhanov and Taygashinova (2023) research enlightens the power of dashboard reporting in making a difference in the application of modernity in managerial accounting. By providing rich insight into management decisions regarding operations and forecasting, dashboard reporting fills the significant gap left by traditional financial accounting methods. This transformation not only provides precise interpretation of financial fundamentals but also brings in a contemporary dimension through which financial data is read and utilized.

1.9 Bridging the Skills Gap

The mass, rapid uptake of dashboard technologies by the management accounting discipline can be viewed as actualizing a very noticeable skills gap – users of the systems must exert not only and rigorous technical expertise but also strategic insight. Moscoso-Paucarchoque (2022) asserts close attention needs to be given to taking a strategic approach in implementing the use of the notion of dashboard reporting in day-to-day management accounting activities. The authors pay special attention to improving professionals' capacity to analyze sophisticated data, business intelligence, and strategic use of accounting and finance data. In addition, the paper of Merulkova, Ihumentseva, and Prokopenko (2021) explains other requirements in developing a management accounting model with the assistance of dashboards – managing KPIs and using other metrics for comparative statements with multiple dimensions. Thus, the authors show a realistic view of the additional skills required for correct using or managing dashboard reporting systems in management accounting.The whole process of incorporating the dashboard reporting systems into the management accounting routine also shows particular challenges. The first and foremost among these is the surmounting of technical hurdles and organizational resistance to change and additional training in skills. Pierotti (2021) and Santos et al. (2021) believe that the challenges need to be deeply investigated to adequately take into account the managerial concerns regarding the deployment of the dashboard reporting. Despite their obnoxious nature, the challenges are an additional source of improvement for the decision-making system, organizational transparency, and strategic planning, among others.This in-depth examination of the issues and opportunities further reinforces the sophisticated complexity of the process for dashboard reporting introduction into management accounting. In addition to this, it marks a transition to hi-tech-based strategy in management accounting and hence implies a persistent learning pace. In particular, people must adapt and implement novel methods and approaches at an increasing rate, something that is significant in dealing with the increasing chaos in financial data and utilizing cutting-edge tools to assist in decision-making and devise strategic plans within organizations.

2. Statistical Results

2.1 Demographic Description

36 (81.8%) held a Master of Science (MSc), while the remaining 8 (18.2%) held a Phd as presented in Figure 1. This suggests that a smaller proportion of participants have completed postgraduate coursework, whereas the bulk possess undergraduate-level qualifications. A solid foundation for examining their perspectives on managerial accounting and dashboard reporting is provided by this educational background.

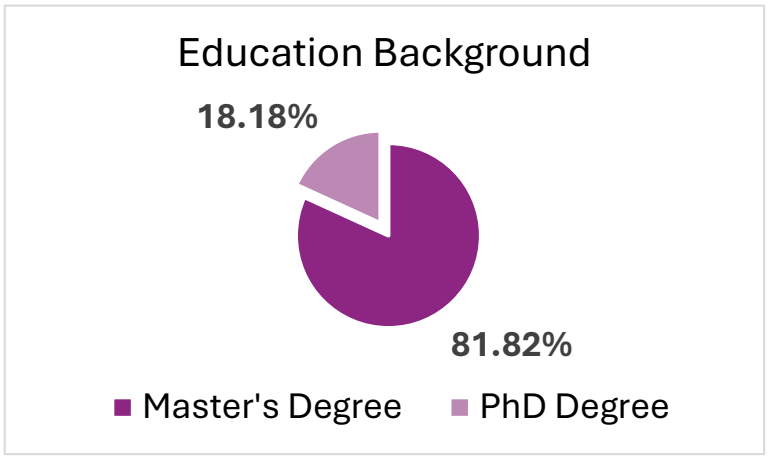

Figure 1: Pie-Chart illustration for the participant's Education background

Additionally, according to Figure 2, 20 people (45.5%) reported having two years of work experience. Six (13.6%) had only one year of experience, seven (15.9%) had three years, and eleven (25.0%) had four years. These figures indicate a participant group with relatively early to mid-level experience in their professional or academic careers. The range of experience levels offers valuable insights into the perceptions of early-career scholars regarding the importance of managerial accounting dashboard reporting skills.

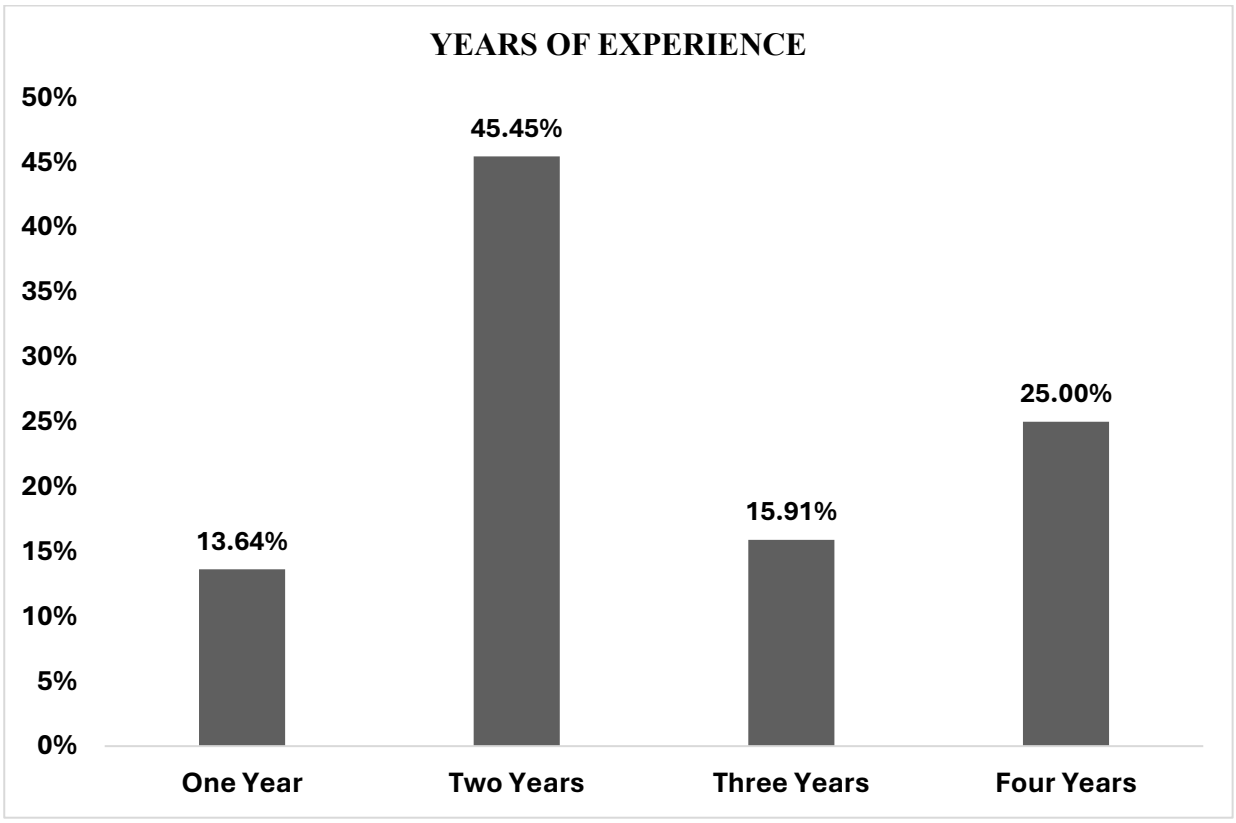

Figure 2: Years of experience exploration of the sample's study

2.2

2.3 Findings of Descriptive Statistics:

A) Dashboard Reporting Skills in Managerial Accounting (IV)

Table 1 shows a comprehensive summary statistics for the items related to the independent variable Dashboard Reporting Skills in Managerial Accounting. With a high agreement rate of 78.90% across all items and an overall mean of 4.16 ± 0.81, the results from the independent variable section show that academics have a good overall assessment of the significance of dashboard reporting skills in management accounting."There is a growing need for accounting graduates to possess dashboard reporting skills" was the statement with the highest level of agreement, with 89.13% of respondents agreeing and a mean score of 4.48 ± 0.63. The statement "Digital dashboards improve the clarity and effectiveness of internal financial reports" also received 86.96% agreement, with a slightly higher mean of 4.48 (± 0.79), indicating a similar high level of consensus regarding dashboards' role in improving communication and reporting quality. This theme was further supported by the overwhelming majority's agreement that dashboards aid in the effective communication of complex financial data by accountants (84.78% agreement, mean = 4.25 ± 0.84), and that management accountants benefit from tools such as Power BI, Tableau, and Excel (86.96% agreement, mean = 4.36 ± 0.78). Although the majority of the questions showed very favorable opinions, responses to items that dealt with curriculum and teaching methods were a little more diverse. For instance, only 63.04% of respondents agreed that “Dashboard tools enhance analysis, planning, and performance monitoring” (mean = 3.73 ± 0.85), and only 60.87% agreed that “Teaching dashboard reporting equips students with practical, decision-oriented financial skills” (mean = 3.75 ± 0.94). These lower agreement levels can be a sign of a lack of clarity on the usefulness of these instruments in educational settings.

Table 1: Overview of Answers on Managerial Accounting Dashboard Reporting Proficiency

Observed Variables (IV - Dashboard Reporting Skills in Managerial Accounting)	Mean ± SD	Agree	Disagree	Neutral
Dashboard reporting tools are becoming essential in modern managerial accounting practices.	4.136 ± 0.824	38 (82.61%)	3 (6.52%)	3 (6.52%)
Skills in tools like Power BI, Tableau, or Excel dashboards are valuable for management accountants.	4.364 ± 0.780	40 (86.96%)	2 (4.35%)	2 (4.35%)
Managerial accounting education should integrate dashboard reporting as a core component.	4.023 ± 0.876	34 (73.91%)	3 (6.52%)	7 (15.22%)
Digital dashboards improve the clarity and effectiveness of internal financial reports.	4.477 ± 0.792	40 (86.96%)	2 (4.35%)	2 (4.35%)
Using dashboards helps accountants communicate complex financial data to decision-makers.	4.250 ± 0.839	39 (84.78%)	3 (6.52%)	2 (4.35%)
There is a growing need for accounting graduates to possess dashboard reporting skills.	4.477 ± 0.628	41 (89.13%)	0 (0.00%)	3 (6.52%)
Dashboard tools enhance analysis, planning, and performance monitoring in managerial accounting.	3.727 ± 0.845	29 (63.04%)	4 (8.70%)	11 (23.91%)
Academic programs should collaborate with industry to incorporate relevant dashboard tools into the curriculum.	4.045 ± 0.861	33 (71.74%)	2 (4.35%)	9 (19.57%)
Teaching dashboard reporting equips students with practical, decision-oriented financial skills.	3.750 ± 0.943	28 (60.87%)	5 (10.87%)	11 (23.91%)
A lack of dashboard training in accounting education limits graduates' readiness for real-world financial roles.	4.295 ± 0.668	41 (89.13%)	1 (2.17%)	2 (4.35%)
Overall Mean	4.155 ± 0.806	78.90%	5.40%	11.30%

However, the general patterns indicate that participants clearly recognize the growing importance of dashboard reporting abilities in contemporary managerial accounting and the need for them to be more fully incorporated into educational curricula.

B) Dashboard Reporting Skills in Managerial Accounting (IV)

Table 2 shows an average agreement rate of 76.10% across all assertions and a collective mean score of 4.04 ± 0.79, the findings show that academic respondents generally have a positive opinion of the impact dashboard reporting has on increasing corporate profitability.

The statement "Dashboard-driven insights help reduce operational waste and inefficiencies" received the highest mean score of 4.46 ± 0.66, and the highest agreement rate of 91.30%, indicating a strong belief in the role dashboards play in operations optimization. Similarly, 86.96% of respondents agreed and the mean score was 4.43 ± 0.73, indicating that they strongly supported the view that "Financial dashboards support proactive strategic planning that drives profitability."

Table 2: Overview of Answers on Enhancing Business Profitability

Observed Variables (DV - Enhancing Business Profitability)	Mean ± SD	Agree	Disagree	Neutral
Effective use of dashboard reporting contributes to better financial decision-making in businesses.	4.091 ± 0.709	37 (80.43%)	1 (2.17%)	6 (13.04%)
Dashboard tools help identify performance trends that can influence profitability.	4.068 ± 0.759	37 (80.43%)	2 (4.35%)	5 (10.87%)
Organizations that adopt dashboard reporting are more likely to achieve financial efficiency.	4.114 ± 0.868	36 (78.26%)	3 (6.52%)	5 (10.87%)
Using visual dashboards improves cost control and resource allocation.	3.977 ± 0.731	36 (78.26%)	2 (4.35%)	6 (13.04%)
Real-time reporting through dashboards enhances responsiveness to financial challenges.	3.977 ± 0.762	35 (76.09%)	2 (4.35%)	7 (15.22%)
Financial dashboards support proactive strategic planning that drives profitability.	4.432 ± 0.728	40 (86.96%)	1 (2.17%)	3 (6.52%)
Businesses can increase profitability by using dashboards to monitor KPIs more effectively.	4.091 ± 0.772	37 (80.43%)	2 (4.35%)	5 (10.87%)
Dashboard-driven insights help reduce operational waste and inefficiencies.	4.455 ± 0.663	42 (91.30%)	1 (2.17%)	1 (2.17%)
The integration of dashboards with accounting systems enhances data-driven profitability strategies.	3.568 ± 0.925	24 (52.17%)	6 (13.04%)	14 (30.43%)
There is a positive link between the use of dashboard reporting and improved business profitability.	3.591 ± 0.948	26 (56.52%)	7 (15.22%)	11 (23.91%)
Overall	4.036 ± 0.787	76.10%	5.90%	13.70%

As evidenced by items like "Effective use of dashboard reporting contributes to better financial decision-making" (mean = 4.09 ± 0.71, 80.43% agreement) and "Dashboard tools help identify performance trends that can influence profitability" (mean = 4.07 ± 0.76, also 80.43% agreement), respondents generally agreed that dashboard tools support decision-making and performance tracking. The two lowest-rated items, however, indicate some hesitation even though they are still above average. These were "There is a positive link between the use of dashboard reporting and improved business profitability" (mean = 3.59 ± 0.95, 56.52% agreement) and "The integration of dashboards with accounting systems enhances data-driven profitability strategies" (mean = 3.57 ± 0.93, 52.17% agreement). These findings might suggest that more teaching examples or more precise empirical connections connecting dashboards to financial outcomes are needed.

Although there is broad consensus that dashboard reporting helps with strategic and operational tasks that impact profitability, opinions on the perceived direct relationship between dashboards and financial performance vary somewhat, indicating that this is an area that could use more attention in both practice and education. "

2.4 Internal Consistency of Study Variables

The internal consistency of the items used to measure the study's main variables was assessed using a reliability analysis. Strong internal reliability (0.901) was shown by the scales' Cronbach's alpha values, which were higher than the generally accepted cutoff of 0.70. This is crucial because it guarantees that the elements continually represent the same underlying constructs, specifically how dashboard reporting abilities are regarded and how they are thought to affect business profitability. High reliability bolsters the validity of any findings derived from the study and enhances the trustworthiness of the data.

The 10 dashboard reporting skills items in the IV had a strong internal consistency dependability, with a Cronbach's Alpha of 0.848. This suggests that the questions are assessing the same underlying construct cohesively because it shows a high degree of internal consistency among the scale items. With a few noteworthy exceptions, the majority of items had corrected item-total correlations above 0.5 when examining the item-total statistics:

- “Using dashboards helps accountants communicate complex financial data to decision-makers” proved to be one of the most important factors in capturing the construct, as evidenced by the greatest correlation (0.744).
- On the other side, items such as "Academic programs should collaborate with industry" (0.388) and "Dashboard tools enhance analysis, planning, and performance monitoring" (0.346) had lower correlations but nevertheless made a significant contribution without impairing overall reliability.

All ten things are suitable for inclusion in the final scale, as no item's removal would substantially increase Cronbach's Alpha.

Main Variables	Items of Dashboard Reporting Skills in Managerial Accounting	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Dashboard Reporting Skills in Managerial Accounting	Dashboard reporting tools are becoming essential in modern managerial accounting practices.	0.646	0.824	0.848
	Skills in tools like Power BI, Tableau, or Excel dashboards are valuable for management accountants.	0.622	0.827	
	Managerial accounting education should integrate dashboard reporting as a core component.	0.653	0.823	
	Digital dashboards improve the clarity and effectiveness of internal financial reports.	0.562	0.832	
	Using dashboards helps accountants communicate complex financial data to decision-makers.	0.744	0.815	
	There is a growing need for accounting graduates to possess dashboard reporting skills.	0.516	0.837	

	Dashboard tools enhance analysis, planning, and performance monitoring in managerial accounting.	0.346	0.852	
	Academic programs should collaborate with industry to incorporate relevant dashboard tools into the curriculum.	0.388	0.849	
	Teaching dashboard reporting equips students with practical, decision-oriented financial skills.	0.420	0.848	
	A lack of dashboard training in accounting education limits graduates' readiness for real-world financial roles.	0.666	0.826	
Enhancing Business Profitability	Effective use of dashboard reporting contributes to better financial decision-making in businesses.	0.594	0.792	0.817
	Dashboard tools help identify performance trends that can influence profitability.	0.460	0.804	
	Organizations that adopt dashboard reporting are more likely to achieve financial efficiency.	0.604	0.788	
	Using visual dashboards improves cost control and resource allocation.	0.693	0.781	
	Real-time reporting through dashboards enhances responsiveness to financial challenges.	0.596	0.790	
	Financial dashboards support proactive strategic planning that drives profitability.	0.352	0.815	
	Businesses can increase profitability by using dashboards to monitor KPIs more effectively.	0.524	0.798	
	Dashboard-driven insights help reduce operational waste and inefficiencies.	0.286	0.820	
	The integration of dashboards with accounting systems enhances data-driven profitability strategies.	0.486	0.803	
	There is a positive link between the use of dashboard reporting and improved business profitability.	0.424	0.811	
Questionnaires observed variables				0.901

The DV scale showed good internal consistency, with a Cronbach's Alpha of 0.817 (standardized to 0.819), and featured 10 items that focused on how dashboard reporting affects profitability. This indicates strong reliability even if it is a little lower than the IV scale, which makes the scale appropriate for additional research. A variety of corrected item-total relationships were found using item-level analysis:

- The item with the strongest correlation (0.693), "Using visual dashboards improves cost control and resource allocation," further supported its applicability to the main idea.

- In contrast, the item "Dashboard-driven insights help reduce operational waste and inefficiencies" had the lowest item-total correlation (0.286), suggesting that it may not be as well matched with the other DV items as the others, but not in a negative way. Eliminating it would not be justified because it would just slightly increase the alpha to 0.820.

The DV scale exhibits acceptable coherence overall, and all items are kept in order to maintain the construct's conceptual breadth.

2.5 Normality Test

The Shapiro-Wilk test was used to evaluate the data's normality and revealed that both Dashboard Reporting Skills in Managerial Accounting in Table 3. Enhancing Business Profitability demonstrated a normal distribution with no significant deviation (p-value =0.081and p =0.555, respectively) and satisfied the normalcy assumption.

Table 3: Shapiro-Wilk Test for Normality of Study Variables

Variables	Shapiro-Wilk		
	Statistic	df	Sig.
Dashboard Reporting Skills in Managerial Accounting	0.939	44	0.081
Enhancing Business Profit	0.978	44	0.555

In order to investigate the effect of categorical variables like educational background as well as years of experience on both variables, independent sample T-test along with one-way ANOVA were applied.

Table 4: Independent Samples T-Test Comparing MSc and PhD Respondents on Key Study Variables

Variables	MSc (n=36)	PhD (n=8)	T-test
	Mean ± SD	Mean ± SD	(P-value)
Dashboard Reporting Skills in Managerial Accounting	4.128 ± 0.571	4.275 ± 0.231	-0.711 (0.481)
Enhancing Business Profit	3.992 ± 0.512	4.238 ± 0.297	-1.303 (0.200)

The opinions of MSc and PhD holders about dashboard reporting abilities and their influence on increasing company profit were compared using the independent samples t-test. The mean scores for business profit (M = 4.24 vs. 3.99) and dashboard reporting skills (M = 4.28 vs. 4.13) were marginally higher among PhD participants, but they were not statistically significant (p-value 0.481 for dashboard skills; p-value 0.200 for increasing business profit. This implies that participants' opinions on these subjects are not substantially influenced by their degree level. Figure 3 shows the distribution of their datasets and states their similarity.

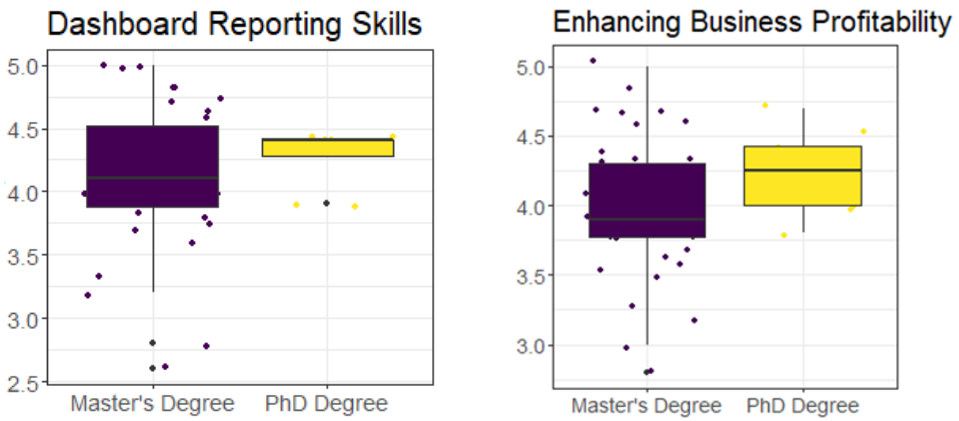

Figure 3: a) Box-plot illustration of dashboard reporting; b) Box-plot illustration of enhancing business profitability with respect to educational background

The differences in opinions of dashboard reporting abilities and increasing corporate profit across four experience levels were investigated using descriptive statistics and ANOVA as shown in Table 5.

Table 5: One-Way ANOVA Comparing Experience Levels on Dashboard Skills and Perceived Business Profit

Variables	One Year	Two Years	Three Years	Four Years	ANOVA Test
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	(P-value)
Dashboard Reporting Skills in Managerial Accounting	4.133 ± 0.674	4.070 ± 0.532	4.514 ± 0.324	4.091 ± 0.505	1.349 (0.272)
Enhancing Business Profit	4.050 ± 0.628	3.970 ± 0.437	4.286 ± 0.524	3.991 ± 0.489	0.757 (0.525)

The differences were not statistically significant, even though mean scores differed slightly between groups for example, those with three years of experience had the greatest assessed dashboard skills, with mean 4.51 and p-value 0.272 for dashboard reporting skills; and mean value 4.286 and p-value 0.525 for increasing corporate profit. Figure 4.a and 4.b imply that opinions of dashboard reporting and their perceived influence on profitability are not much impacted by years of experience.

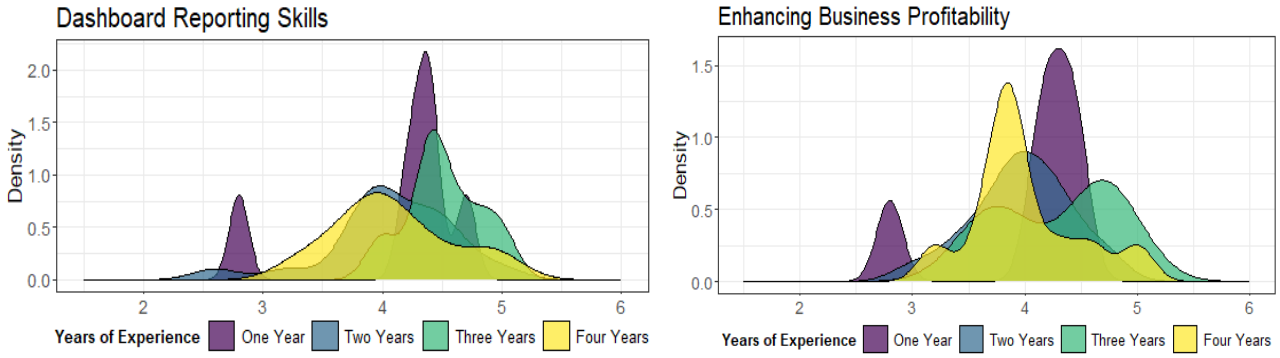

Figure 4: a) Density probability distribution of dashboard reporting skills; b) Density probability distribution of with respect years of experience

2.6 Correlation Analysis of Dashboard Reporting Skills and Enhancing Business Profitability

Table 6 explored Pearson correlation analysis the Pearson correlation analysis and showed a strong and statistically significant positive relationship between college academics' opinions on enhancing business profitability and their perceptions of dashboard reporting skills in managerial accounting with correlation coefficient 0.738 and a p-value <.001. This substantial association implies that respondents who place a higher value on dashboard reporting abilities also have a stronger belief in their ability to increase company profitability.

Table 6: Pearson Correlation Between Dashboard Reporting Skills and Enhancing Business Profit

Variables	Pearson Correlation (r)	Sig. (2-tailed)	N
Dashboard Reporting Skills & Enhancing Business Profit	0.738**	0.000	44

The correlation analysis's Hypothesis $\mathbf{H_1}$, which postulated a significant link between these two constructs, is amply supported empirically by this finding. The null hypothesis ($\mathbf{H_0}$), which maintained that there is no such association, is also rejected as a result of the outcome. Because dashboard reporting technologies are seen to improve financial decision-making and organizational performance, their strength and significance highlight the perceived value of incorporating them into managerial accounting education and practice.

2.7 Impact Analysis of Dashboard Reporting Skills on Enhancing Business Profitability

Regression analysis showed that views of increasing business profitability are highly predicted by managerial accounting dashboard reporting skills. With a robust R^2 value of 54.5%, the model demonstrated that dashboard reporting abilities account for roughly 54.5% of the variation in perceived firm profitability. The overall importance of the model is confirmed by the F-statistic (F = 50.217, p <.001).

Table 7: Regression Analysis of Dashboard Skills Predicting Business Profit

Model		Unstandardized Coefficients		T-value (p-value)	F Value (p-value)	R-Square
		B	SE			
Model 1	(Constant)	1.204	0.403	2.989 (0.005)	50.217 (0.000)	54.5 %
	X1	0.682	0.096	7.086 (0.000)		

Additionally, the dashboard reporting skills coefficient was 0.682, showing a substantial and statistically significant positive effect with a p-value <.001. These results corroborate the regression analysis's Hypothesis H_1, which assumed that views of dashboard reporting abilities are a strong predictor of perceived firm profitability. As a result, the null hypothesis (H_0) is disproved, highlighting the significant impact dashboard competencies have on opinions on profitability outcomes.

3. Key Results, Conclusions, and Recommendations

3.1 Key Results:

- Academics largely agree on the importance of dashboard reporting skills in managerial accounting, with an overall agreement rate of 78.90%.
- A significant positive correlation ($r = 0.738$, $p < 0.001$) exists between perceptions of dashboard reporting skills and their impact on business profitability.
- Dashboard reporting skills significantly predict perceptions of business profitability, explaining approximately 54.5% of the variability ($R^2 = 54.5\%$).
- While dashboards are acknowledged as essential tools, there remains uncertainty about their effective integration within academic curricula.
- Based on the correlation analysis, Hypothesis H_1 is accepted, confirming a significant positive correlation ($r = 0.738$, $p < 0.001$) between dashboard reporting skills and perceived impact on business profitability. Consequently, the null hypothesis H_0 is rejected. Similarly, regression analysis significantly supported Hypothesis H_1, demonstrating dashboard skills as a strong predictor of perceived business profitability ($R^2 = 54.5\%$, $p < 0.001$). Therefore, the null hypothesis for regression analysis is also rejected

3.2 Conclusion:

The findings of this study underscore the critical importance of dashboard reporting skills in managerial accounting education. A robust correlation and predictive analysis indicate these skills significantly influence academic perceptions regarding their contribution to enhancing business profitability. However, the presence of uncertainty about curriculum integration suggests a clear need for improved educational approaches and empirical demonstrations to bridge existing gaps and effectively prepare graduates for industry demands.

3.3 Recommendations:

1. **Curriculum Development**:Systematically integrate practical dashboard reporting skills within managerial accounting courses, supported by industry collaboration.
2. **Targeted Training Initiatives**:Provide hands-on training programs using dashboard tools such as Power BI, Tableau, and Excel to strengthen practical skills.
3. **Empirical Research Enhancement**:Conduct further empirical studies to reinforce the measurable impact of dashboard reporting skills on financial performance.
4. **Professional Development Programs**:Establish ongoing professional training and certification initiatives to continuously develop dashboard competencies among practitioners.
5. **Practical curriculum integration**: It is recommended to include real-world case studies and project-based assignments where students directly apply dashboard tools to solve actual financial reporting problems. Collaborations with industry professionals to deliver guest lectures and workshops would also enrich the curriculum by providing contemporary, practical insights.

Implementing these strategies will effectively align educational outcomes with contemporary managerial accounting practices, enhancing graduates' readiness for impactful roles in organizational profitability and strategic planning.

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