

ENHANCING BUDGETING ACCURACY THROUGH ACTIVITY-BASED COSTING: A QUALITATIVE STUDY ON COST CONTROL PRACTICES IN EDUCATIONAL INSTITUTIONS

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Abstract

The determination of educational unit costs using traditional costing methods is often considered inaccurate, as these methods allocate overhead costs uniformly and do not reflect the actual consumption of resources by each cost object. This condition may lead to cost distortion, particularly undercosting or overcosting, which can affect managerial decision-making in educational institutions. An alternative approach that can provide more accurate cost information is the Activity-Based Costing (ABC) method, which allocates costs based on activities that drive resource consumption. This study aims to enhance understanding of educational unit cost determination using the Activity-Based Costing method and to evaluate differences between unit cost calculations based on the Activity-Based Costing method and those currently applied by the school. This research employs a descriptive qualitative approach with a case study design conducted at SMA Pasundan 3 Cimahi. Data were collected through interviews, documentation analysis, and literature review. The findings reveal significant differences between unit cost calculations using the traditional method and those derived from the Activity-Based Costing method. The application of the Activity-Based Costing method indicates the occurrence of undercosting in the unit cost previously determined by the school. These discrepancies arise because traditional costing methods do not allocate overhead costs proportionally to students based on actual activity consumption. The study concludes that the Activity-Based Costing method provides more accurate and relevant cost information for educational institutions and can support better budgeting, cost control, and managerial decision-making. This research contributes to the management accounting literature by providing empirical evidence on the applicability and benefits of ABC in a non-profit educational setting, offering practical insights for school administrators and policymakers to enhance financial transparency and resource allocation efficiency.

Keywords: Activity-based costing, educational, unit cost, cost control, management accounting, budgeting.

1. INTRODUCTION

Budgeting and cost control are fundamental components of management accounting that support planning, coordination, and performance evaluation within organizations (Ai Nur Rohimah & Purwanti, 2025). A country's economy depends on its existing industries. In Indonesia, the education sector, as a vital part of the service industry, plays a significant role in national development and economic resilience, as highlighted by policymakers (Santoso, 2024). Consequently, educational institutions face growing pressure to manage their financial resources with greater transparency, efficiency, and accountability.

Educational institutions are increasingly required to manage their financial resources in a transparent, efficient, and accountable manner. In Indonesia, budgeting

challenges are intensified by the dominance of indirect costs and the diversity of activities performed. Schools and other non-profit educational organizations face growing pressure from stakeholders including parents, governing bodies, and regulators to ensure that tuition fees and other educational charges are determined based on accurate and justifiable cost structures. Effective budgeting and cost control therefore become essential components of management accounting practices within the education sector.

Despite this importance, many educational institutions in Indonesia continue to rely on traditional costing and budgeting methods that allocate overhead costs using broad and simplified bases. Such approaches often fail to capture the complexity of educational activities, where different programs, grade levels, and services consume resources in varying proportions. As a result, inaccurate cost information may distort budgeting decisions, weaken cost control, and potentially undermine managerial accountability.

Management accounting literature emphasizes that budgeting and cost control are not merely technical processes, but strategic tools that support managerial decision-making (Shawe, 2023). Accurate cost information enables managers to plan resources, evaluate performance, and make informed decisions regarding pricing, efficiency, and service sustainability (Evianti et al., 2024). However, empirical evidence on how management accounting tools are applied in non-profit educational institutions particularly in developing country contexts remains limited.

According to data from the Central Statistics Agency (BPS), education inflation in January 2025 reached 2.05% year on year, indicating a consistent trend of increasing education costs from year to year (BPS, 2025). Specifically, the average cost of basic education in Indonesia is increasing by 10%-15% per year. The Central Statistics Agency (BPS) also states that education costs are one of the largest expenditures for the public. However, based on the results of a survey conducted by the author in several private schools in Cimahi City, a statement was obtained from SMA Kartika XIX-4, that the school was still unsure regarding the calculation of the school fee they set, because the school's strategy of setting the school fees at low rates was only to attract new students who wanted to register, so that the target students obtained were achieved. Meanwhile, from MTS Nurul Falah, an explanation was obtained that the calculation of the school fee was carried out by calculating the needs or expenses of the school for 1 year, then divided by the total number of students, and divided for 12 months, then the school fee per month was obtained. From this explanation, it can be concluded that the calculation of the school fee in several schools is only based on several estimates. Traditional costing systems, which commonly allocate overhead costs using broad averages, often fail to capture actual resource consumption, leading to distorted cost information and suboptimal managerial decisions (Drury, 2018).

Activity-Based Costing was developed to address these limitations by assigning costs to activities that consume resources and subsequently to cost objects based on appropriate cost drivers. (Kaplan, 2020) define Activity-Based Costing as a costing system that provides more accurate product or service costs by focusing on activities as the fundamental cost objects. Prior studies have emphasized that Activity-Based Costing can improve the relevance of cost information for budgeting and managerial control, particularly in organizations with complex operational processes (Bhimani et al., 2023).

In the Indonesian education sector, the adoption of Activity-Based Costing remains relatively rare, and its managerial implications are not yet fully understood. Existing research tends to emphasize cost comparison outcomes, rather than exploring how activity-based information supports budgeting accuracy and managerial control. Few studies have specifically examined how ABC can enhance budgeting accuracy and strengthen cost control practices in Indonesian non-profit schools. This creates a research gap regarding the strategic use of Activity-Based Costing for budgeting and cost control in non-profit educational institutions.

Accordingly, this study aims to explore how Activity-Based Costing can enhance budgeting accuracy and strengthen cost control practices in an Indonesian educational institution. Using a qualitative case study approach, this research seeks to provide in-depth insights into existing budgeting practices, identify discrepancies between traditional costing and Activity-Based Costing based calculations, and analyze the implications of Activity-Based Costing for managerial decision-making. By doing so, this study contributes to the management accounting literature and offers practical insights for educational managers and policymakers in Indonesia.

2. METHODOLOGY

This study employs a descriptive qualitative research approach with a case study design. The descriptive approach is used to provide a comprehensive and systematic description of the process of determining educational unit costs, while the case study method allows for an in-depth analysis of cost calculation practices within a specific educational institution. The case study was conducted at SMA Pasundan 3 Cimahi, which currently applies a traditional costing method in determining its educational unit costs.

The object of this research is the determination of educational unit costs, particularly the allocation of overhead costs to students as cost objects. The study focuses on identifying cost components, classifying activities, and analyzing cost drivers related to the educational process. The Activity-Based Costing method is applied as an alternative approach to calculate unit costs more accurately by tracing costs to activities that consume resources.

Research data were obtained from both primary and secondary sources. Primary data were collected through semi-structured interviews with school management and

administrative staff involved in financial planning and cost allocation. Secondary data were gathered from school financial documents, budgeting reports, and other relevant documentation, as well as supporting literature related to management accounting and cost determination in educational institutions.

The data analysis was conducted in several stages. First, costs were identified and classified into direct costs and overhead costs. Second, major activities related to educational services were identified, and appropriate cost drivers were determined for each activity. Third, overhead costs were allocated to activities based on the selected cost drivers, and subsequently assigned to students as cost objects using the Activity-Based Costing method. Finally, the unit cost results obtained from the Activity-Based Costing method were compared with those calculated using the traditional costing method currently applied by the school to evaluate differences and identify potential cost distortions.

3. FINDINGS AND DISCUSSION

3.1 Budgeting and Cost Allocation Using the Traditional Costing Method

The findings of this study indicate that the determination of educational unit costs at SMA Pasundan 3 Cimahi using traditional costing methods does not fully reflect the actual consumption of resources by students. Under the traditional method, overhead costs are allocated using a single allocation base, resulting in uniform cost charges per student without considering the diversity of activities performed within the institution. This method simplifies budget preparation but provides limited insight into actual resource consumption.

As a result, cost information generated through the traditional costing system lacks accuracy at the activity level. Several cost-intensive activities are not properly identified, leading to cost distortions in the budgeting process. These distortions make it difficult for management to evaluate budget efficiency and to implement effective cost control measures. This finding is consistent with management accounting literature which suggests that traditional costing systems are less suitable for organizations with complex and service-oriented operations (Drury, 2018).

3.2 Cost Allocation Results under Activity-Based Costing

The application of Activity-Based Costing reveals a more detailed and accurate allocation of costs by tracing resource consumption to specific activities. Key activities identified at SMA Pasundan 3 Cimahi include teaching and learning processes, administrative services, and facility support activities. Costs are allocated to these activities using relevant cost drivers that reflect actual usage of resources. These activities are classified into a hierarchical framework: unit-level activity costs (school administration per student and routine student services), batch-level activity costs (costs per class session or per examination batch), product-level activity costs (curriculum development costs and specific program costs for science or social studies

tracks), and facility-level activity costs (infrastructure maintenance, security, and utilities).

The results show significant differences between the traditional costing method and the Activity-Based Costing approach. Several activities that were previously classified as low-cost under the traditional system were found to consume a higher proportion of resources when analyzed using Activity-Based Costing. Conversely, some activities were overcosted under the traditional method. These findings confirm the presence of cost distortions in the existing budgeting system and demonstrate the superiority of Activity-Based Costing in providing more reliable cost information. (Kaplan, 2020) emphasize that Activity-Based Costing improves cost accuracy by focusing on activities as the primary cost objects.

Table 1 presents a summary comparison between traditional costing and Activity-Based Costing and their implications for budgeting accuracy and cost control, illustrated with contextual examples from this study.

Table 1: Comparison of Traditional Costing and Activity-Based Costing: Implications for Educational Institutions

Costing Aspect	Traditional Costing	Activity-Based Costing	Implication for Budgeting and Cost Control
Cost allocation basis	Aggregated expenditure categories (total utilities, total admin salaries)	Activity-based cost drivers (kilowatt-hours per lab, number of student transactions)	Improves alignment between costs and activities. Example: Budget for utilities can now be planned based on actual usage by different departments (labs, offices, classrooms) rather than a flat rate.
Cost accuracy	High risk of overcosting and undercosting	More accurate reflection of resource consumption	Enhances budgeting accuracy
Managerial insight	Limited visibility of cost drivers	Clear identification of cost-intensive activities	Strengthens cost control decisions
Cost transparency	Low	High	Supports identification of non-value-added activities

Source: Processed data (2025)

From a management accounting perspective, the findings support prior research suggesting that Activity-Based Costing enhances budgeting accuracy by aligning cost allocation with actual activities performed within organizations (Dlamini, 2024). Furthermore, Activity-Based Costing improves cost control by increasing managerial awareness of cost behaviour and resource utilization. In the context of Indonesian educational institutions, the adoption of Activity-Based Costing contributes to improved financial accountability and supports sustainable institutional management (Quesado & Silva, 2021).

3.3 Implications for Budgeting Accuracy and Cost Control

From a management accounting perspective, the findings demonstrate that Activity-Based Costing significantly enhances budgeting accuracy by aligning cost allocation with actual activities performed within the institution. Activity-based cost information enables management to prepare more realistic budgets and to allocate resources based on operational needs rather than aggregated estimates. Prior studies support the role of Activity-Based Costing in improving the relevance of cost information for budgeting and decision-making (Atkinson et al., 2021).

Strategically, the shift to ABC has direct implications for key managerial decisions at SMA Pasundan 3 Cimahi. First, in tuition fee setting (SPP), ABC provides a defensible and transparent cost basis. Management can move away from flat-rate or market-based pricing to a cost-informed model, potentially justifying differential fees for programs with higher resource intensity (e.g., science vs. humanities). Second, regarding internal resource allocation, ABC highlights which activities or departments are the primary cost consumers. This insight allows for targeted cost-control measures, such as optimizing energy use in high-consumption facilities or evaluating the cost-effectiveness of certain administrative processes. Third, it strengthens stakeholder accountability. By demonstrating how funds are consumed by specific educational activities, the school can provide clearer justification for fees and expenditures to parents and oversight boards.

In terms of cost control, Activity-Based Costing improves managerial awareness of cost behaviour and resource utilization. By identifying cost drivers and activity-level costs, managers are better equipped to monitor budget variances and to identify non-value-added activities. This enhanced transparency supports more effective cost control and contributes to improved financial accountability. In the context of Indonesian educational institutions, the implementation of Activity-Based Costing represents a strategic management accounting tool that supports sustainable financial management.

4. CONCLUSION

This study confirms that the traditional costing method applied at SMA Pasundan 3 Cimahi is insufficient to capture the complexity of resource consumption in educational services. The reliance on single allocation bases leads to cost distortions,

particularly undercosting, which may obscure the true cost structure of educational activities. Such distortions can reduce the reliability of cost information used in budgeting and weaken managerial control over institutional resources.

The implementation of the Activity-Based Costing method demonstrates its effectiveness in improving the accuracy and transparency of educational unit cost determination. By allocating costs based on actual activities and relevant cost drivers, Activity-Based Costing provides more detailed and meaningful cost information compared to traditional costing systems. The findings indicate that Activity-Based Costing not only corrects cost distortions but also enhances the quality of budgeting by aligning financial planning with operational realities.

From a management accounting perspective, this study contributes to the growing body of empirical evidence supporting Activity-Based Costing as a strategic cost management tool in service-oriented organizations, particularly within the education sector. The application of Activity-Based Costing enables educational institutions to identify cost-intensive activities, evaluate resource efficiency, and strengthen cost control mechanisms. Moreover, improved cost visibility supports more informed managerial decision-making and enhances financial accountability, which is increasingly important in the context of limited educational funding and demands for transparency.

In practical terms, the adoption of Activity-Based Costing can assist school management in developing more realistic budgets, improving cost control practices, and supporting sustainable financial management. Activity-Based Costing based cost information may also serve as a valuable reference for policymakers and education administrators in designing funding strategies and evaluating the efficiency of educational service delivery.

Despite its contributions, this study is subject to limitations, as it is based on a single case study and adopts a qualitative approach. Consequently, the findings may not be fully generalizable to all educational institutions. Future research is encouraged to expand the scope of analysis by incorporating multiple case studies, longitudinal data, or quantitative methods to further examine the impact of Activity-Based Costing on financial performance, efficiency, and strategic decision-making in the education sector.

Overall, this study highlights the potential of Activity-Based Costing to serve as an effective management accounting tool for improving cost accuracy, budgeting quality, and cost control in educational institutions, thereby supporting long-term financial sustainability and institutional performance.

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