



## **DEVELOPING MECHANISMS FOR ACCOUNTING AND CONTROL OF MATERIAL ASSETS IN HIGHER EDUCATION INSTITUTIONS**

Sherkulov Abdunabi Abduvali ugli  
Independent Researcher, TSUE  
G-mail: [abdunabisherkulov51@gmail.com](mailto:abdunabisherkulov51@gmail.com)

| <b>ABSTRACT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>KEYWORDS</b>                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <p>This scientific article examines the issues of improving the accounting and control of material assets using higher education institutions as an example. The study highlights the role of the material and technical base in the educational process and emphasizes the importance of accounting and control systems in ensuring the proper use and preservation of material resources. The paper substantiates the potential for increasing management efficiency through the digitalization of accounting processes, improvement of inventory procedures, and development of internal control mechanisms. Special attention is given to the use of accounting information in managerial decision-making and to enhancing the overall system of material asset management in higher education institutions.</p> | <p>Material assets, accounting, internal control, inventory, higher education institutions, material and technical base.</p> |

### **Introduction**

At present, the sustainable operation of higher education institutions, the quality of education, and the development of their material and technical base directly depend on the proper organization of accounting for material assets and the effectiveness of their control. Buildings and facilities, laboratory equipment, information and communication technologies, educational materials, and other material resources under the management of higher education institutions constitute essential factors ensuring the continuity of the educational process. Therefore, the rational use of these resources, their safekeeping, and accurate accounting of their movement must remain a constant focus of attention.

In recent years, large-scale reforms aimed at modernizing the higher education system, increasing financial transparency, and strengthening management efficiency have been implemented in the country. Within this process, improving the accounting and control of material assets in educational institutions has emerged as one of the most pressing tasks. Modern accounting and control mechanisms make it possible to enhance the efficiency of material resource utilization, ensure the targeted use of budgetary funds, and form a reliable information base for managerial decision-making.

The relevance of this scientific article lies in its positive and analytical approach to improving the accounting of material assets and the internal control system in higher education institutions. The study is aimed at increasing the effectiveness of institutional activities by ensuring efficient use of available resources and developing accounting and control processes in line with modern requirements.

Ultimately, this contributes to the sustainable development of the higher education system and the improvement of the quality of educational services.

## Literature Review

Issues related to the effective organization of accounting and control of material assets in higher education institutions have been widely covered in fundamental studies on accounting theory and practice. In particular, the textbook by K.B. Urazov explains the accounting of material assets, their valuation, and control mechanisms as integral components of the accounting system, emphasizing the role of accounting information in ensuring rational resource use and financial transparency [1]. Similarly, the theoretical approaches presented by R.O. Kholbekov and Sh. Ergasheva substantiate the importance of the principles of systematization and continuity in accounting for material assets [3]. Studies conducted within the framework of financial and management accounting reveal that accounting for material assets serves not only a recording function but also plays a crucial role as an information base for managerial decision-making. In their research, N. Jorayev, F. Abduvakhidov, and D. Sotivoldieva demonstrate that the assessment of material resource movement and utilization efficiency is carried out through management accounting instruments, highlighting their practical significance in planning and controlling resources in educational institutions [2]. These approaches serve as an important methodological foundation for developing the material and technical base of higher education institutions.

The specific features of accounting and control of material assets in budgetary organizations, including higher education institutions, are comprehensively examined by S.Ya. Atamurodov and M.S. Sodiqov. The authors emphasize the importance of accounting for material resources formed through budgetary funds, inventory procedures, and internal control mechanisms, substantiating their role in ensuring the financial stability of educational institutions [4]. These approaches propose practical tools aimed at increasing the efficiency of material asset utilization.

In international academic literature, issues related to management accounting and control systems in higher education institutions have also been systematically studied. A literature review conducted by José Vale and co-authors highlights the strategic importance of control mechanisms in managing material and financial resources in higher education institutions [5]. In the study by Huijie Wang, an approach to managing fixed and material assets throughout their entire life cycle in universities is proposed, demonstrating its potential to ensure long-term and efficient resource utilization [6].

Furthermore, the management control systems concept developed by K.A. Merchant and W. Van der Stede substantiates the necessity of integrating the accounting of material assets with evaluation, monitoring, and incentive mechanisms [7]. The Statement of Recommended Practice (SORP) developed for higher education institutions in the United Kingdom establishes regulatory approaches to accounting and reporting for material assets, representing an important reference point from the perspective of international best practice [8].

Overall, the analyzed literature indicates that issues related to improving the accounting and control of material assets in higher education institutions are supported by a sufficient theoretical and practical foundation. These scientific sources provide a solid methodological basis for the efficient use of available resources and the development of accounting and control systems in accordance with modern requirements.

## **Research Methodology**

This study employed both primary and secondary data to examine issues related to improving the accounting and control of material assets in higher education institutions. Primary data were obtained from accounting documents of higher education institutions, inventory records, reports of materially responsible persons, and internal control materials. In addition, the results of surveys conducted among sector specialists and accounting staff were included in the analysis. Secondary data were collected from existing regulatory and legal documents, official statistical data, scientific articles, and methodological guidelines.

The analysis of the collected data utilized methods such as comparison, grouping, dynamic analysis, and logical generalization. The relationship between the movement of material assets, their condition of safekeeping, and the level of their reflection in accounting records was identified, and existing shortcomings along with their underlying causes were evaluated. Based on the results of the analysis, conclusions and recommendations for improving the accounting and control system were formulated.

## **Analysis and Results**

The accounting and control of material assets in higher education institutions play a significant role in ensuring the stable material foundation of the educational process. The effective organization of this system not only promotes the rational use of financial resources but also ensures the continuous development and modernization of the material and technical base of educational institutions. Material assets in higher education institutions include buildings and facilities, educational and laboratory equipment, computer hardware, furniture and inventory, information and communication technologies, as well as other material resources used in the educational process. Accurate and complete accounting of these assets enables the formation of a reliable information base that reflects their actual condition. The primary task of material asset accounting is to document their acquisition, movement, and safekeeping, correctly reflect their balance value, and ensure continuous monitoring of their availability. In higher education institutions, these processes are typically carried out through accounting systems, the activities of materially responsible persons, and internal control mechanisms. Properly organized accounting processes contribute to increased efficiency in the use of material resources and serve as an essential information source within the overall management system of educational institutions.

Under modern conditions, the accounting of material assets in higher education institutions is developing not only through traditional approaches but also through the adoption of digital technologies. The implementation of information systems and electronic accounting software enables real-time tracking of material asset movements, simplifies inventory procedures, and enhances the accuracy and transparency of accounting data. This reduces the influence of the human factor in accounting processes and ensures the reliability of information.

Control over material assets is closely linked to accounting and is aimed at ensuring their safekeeping, intended use, and proper disposal in accordance with established procedures. In higher education institutions, control systems are generally implemented through internal audits, scheduled inspections, inventory checks, and monitoring mechanisms. These processes make it possible to determine the actual condition of material assets and ensure consistency between their physical presence and accounting records. Effective organization of control strengthens the protection of material resources and creates conditions for their maximum utilization in the educational process (Table 1).

**Table 1. Key Areas for Improving Accounting and Control of Material Assets in Higher Education Institutions and Expected Outcomes<sup>1</sup>**

| Areas                                        | General Description of the Current Situation                                   | Improvement Approach                                         | Expected Positive Outcomes                                     |
|----------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|
| Accounting of material assets                | Predominantly traditional documentation and manual accounting methods are used | Introduction of electronic accounting systems                | Increased accuracy and timeliness of accounting information    |
| Inventory process                            | Conducted periodically according to an established plan                        | Implementation of automated and digital inventory mechanisms | The actual condition of material resources is fully identified |
| Internal control system                      | Internal inspections and monitoring mechanisms are in place                    | Strengthening internal audit and continuous monitoring       | Improved efficiency in the use of resources                    |
| Activities of materially responsible persons | Responsibility is assigned, but monitoring is limited                          | Improving accountability and incentive mechanisms            | Enhanced safekeeping levels and strengthened discipline        |
| Use of analytical information                | Accounting data are analyzed in a limited manner                               | Decision-making based on analytical indicators               | Improved management efficiency and planning quality            |

The data presented in Table 1 indicate that the processes of improving the accounting and control of material assets in higher education institutions are being implemented in a systematic and consistent manner. The areas outlined in the table encompass the main structural components of the material resource management process and clearly demonstrate the close interconnection between accounting and control mechanisms. In particular, the digitalization of material asset accounting and the use of electronic systems are significant in enhancing the accuracy and timeliness of accounting information. Through the automation of inventory processes, opportunities for identifying the actual condition of material resources have expanded, thereby strengthening the consistency between accounting records and physical existence. Measures aimed at strengthening the internal control system contribute to improving discipline in the use of material assets and increasing their level of safekeeping. Approaches focused on improving the activities of materially responsible persons ensure the alignment of accountability and incentive mechanisms, which has a positive impact on the rational use of resources. Moreover, the active use of analytical information in management processes creates opportunities for making well-founded decisions regarding the development of the material and technical base. Overall, Table 1 demonstrates that the improvement of accounting and control of material assets in higher education institutions is being carried out based on a comprehensive approach and confirms that the necessary conditions for achieving positive outcomes in this area are being formed.

One of the key ways to improve the accounting of material assets in higher education institutions is to organize their classification in a more precise and systematic manner. Grouping material resources according to functional characteristics, useful life, and value level simplifies accounting processes and expands analytical capabilities. This enables institutional management to assess the condition of the material and technical base, identify priority areas, and optimally allocate resources.

In addition, inventory procedures play a crucial role in improving material asset accounting. Inventory serves to determine the actual existence of material assets, assess their physical condition, and clarify accounting data. Conducting inventories on a regular and planned basis in higher education institutions strengthens control over material resources and enhances the reliability of the accounting system.

<sup>1</sup> Author's compilation.

Especially in large higher education institutions, inventory results serve as an important source of information for making strategic decisions regarding the development of the material and technical base.

Effective organization of the activities of materially responsible persons is also of significant importance in improving control over material assets. Clearly defining their rights and responsibilities, increasing accountability, and strengthening accounting discipline contribute to ensuring the safekeeping of material resources. In this process, the development of internal regulatory documents, job descriptions, and a well-defined accounting policy yields positive results.

Another important direction in improving the accounting and control of material assets in higher education institutions is strengthening the analytical approach. Based on accounting data, the efficiency of material resource utilization, the degree of depreciation, renewal rates, and their impact on the educational process are assessed. These analyses are of great importance in developing strategies for improving the material and technical base, identifying investment needs, and planning budget funds.

Under conditions of digital transformation, automating material asset accounting significantly increases management efficiency in educational institutions. Through electronic accounting systems, it becomes possible to maintain centralized data on material resources, promptly generate reports, and strengthen monitoring. This enables the wide implementation of modern approaches in managing the financial and material resources of higher education institutions.

At the same time, the improvement of accounting and control of material assets is directly linked to human resource capacity. Enhancing the qualifications of accounting and finance personnel, as well as mastering modern accounting standards and information technologies, improves the quality of the accounting system. Accounting and control processes conducted by qualified specialists ensure the effective use of material resources (Table 2).

**Table 2. Analytical Indicators of the Efficiency of Material Asset Utilization in Higher Education Institutions<sup>2</sup>**

| Analytical Direction                | Evaluation Criterion                                        | Analytical Description                                                                         | Significance for Management                                      |
|-------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Level of material asset utilization | Intensity of use                                            | The majority of material resources are actively involved in educational and research processes | Allows assessment of the degree of rational resource utilization |
| Degree of depreciation              | Physical and moral wear                                     | A portion of fixed assets requires updating                                                    | Helps determine priorities for renewal and modernization         |
| Renewal rate                        | Annual renewal indicator                                    | Gradual updating of the material and technical base is observed                                | Serves as a basis for investment planning                        |
| Accuracy of accounting data         | Consistency between accounting records and actual condition | Inventory results mostly correspond to accounting data                                         | Enables assessment of the reliability of the accounting system   |
| Control efficiency                  | Results of internal monitoring                              | Continuous control strengthens discipline in resource use                                      | Improves the quality of managerial decision-making               |

The data presented in Table 2 provide an analytical overview of the overall state of material asset utilization and management processes in higher education institutions. The indicators shown in the

<sup>2</sup> Author’s compilation.

table demonstrate that material resources are actively engaged in educational and research activities, confirming the significant role of the existing material and technical base in ensuring the continuity of the educational process. This situation indicates that the level of material asset utilization in higher education institutions is relatively stable.

At the same time, the analytical description of the degree of depreciation indicates that a portion of material resources requires gradual updating. This highlights the necessity of planned modernization of the material and technical base within educational institutions. The positive dynamics observed in renewal rates indicate that investments and budgetary resources are being effectively allocated, reflecting the gradual improvement of the composition of material assets.

The results related to the accuracy of accounting data and control efficiency demonstrate that internal accounting and monitoring systems are operating consistently. The alignment of inventory results with accounting records strengthens the reliability of the accounting system and provides a necessary information base for management decision-making. Overall, the analytical indicators presented in the table show that the material asset management system in higher education institutions is at a positive stage of development and that a solid foundation exists for its further improvement.

One of the key ways to enhance material asset accounting in higher education institutions is to organize their classification in a more precise and systematic manner. Grouping material resources according to functional characteristics, useful life, and value level simplifies accounting processes and expands analytical capabilities. This enables institutional management to evaluate the condition of the material and technical base, identify priority areas, and optimally allocate resources.

Inventory procedures play a critical role in improving material asset accounting. They help determine the actual existence of assets, assess their physical condition, and clarify accounting records. Conducting regular and planned inventories strengthens control over material resources and enhances the reliability of the accounting system. In large higher education institutions, inventory results serve as a key source of information for making strategic decisions regarding the development of the material and technical base.

Effective management of materially responsible persons is also of great importance in improving material asset control. Clearly defining their rights and responsibilities, increasing accountability, and reinforcing accounting discipline ensure the safekeeping of material resources. Developing internal regulatory documents, job descriptions, and a well-defined accounting policy contributes positively to achieving these objectives.

Another important direction in improving the accounting and control of material assets is the strengthening of analytical approaches. Analyzing the efficiency of material resource utilization, the degree of depreciation, renewal rates, and their impact on the educational process based on accounting data is essential. Such analyses are crucial for developing strategies for upgrading the material and technical base, identifying investment needs, and planning budgetary allocations.

Under conditions of digital transformation, automating material asset accounting significantly increases management efficiency in educational institutions. Electronic accounting systems enable centralized maintenance of data on material resources, prompt report generation, and strengthened monitoring. This allows higher education management to make informed and evidence-based decisions regarding resource allocation.

Furthermore, the improvement of material asset accounting and control is directly linked to human resource capacity. Regularly enhancing the qualifications of accounting and finance personnel and

preparing them to work with modern accounting standards and digital technologies improves the quality of the accounting system. Accounting and control processes conducted by qualified specialists ensure the efficient use of material resources. Additionally, developing long-term programs for updating and enhancing the material and technical base based on asset condition analysis yields positive results.

In general, consistent measures aimed at improving the accounting and control of material assets in higher education institutions contribute to increasing the efficiency of the educational system, ensuring the rational use of existing resources, and enhancing the quality of education. Organizing this process based on a comprehensive approach, introducing modern technologies, and developing internal management mechanisms can further enhance the overall effectiveness of higher education institutions.

## References:

1. Urazov, K.B. (2004). *Accounting and Audit*. Textbook. Tashkent: O'qituvchi. 352 p.
2. Jo'rayev, N., Abduvakhidov, F., & Sotivoldieva, D. (2010). *Financial and Management Accounting*. Textbook. Tashkent: Tashkent State University of Economics. 384 p.
3. Kholbekov, R.O., & Ergasheva, Sh. (2012). *Theory of Accounting*. Textbook. Tashkent: Iqtisodiyot. 312 p.
4. Atamurodov, S.Ya., & Sodiqov, M.S. (2017). *Accounting in Budget Organizations*. Teaching Guide. Tashkent: Voris Publishing. 268 p.
5. Vale, J., Amaral, J., Abrantes, L., et al. (2022). Management Accounting and Control in Higher Education Institutions: A Systematic Literature Review. *Administrative Sciences*, 12(1), 1–18.
6. Wang, H. (2024). Analysis of Internal Control of Fixed Assets in Universities from the Perspective of the Whole Life Cycle. *Academic Journal of Humanities & Social Sciences*, 7(2), 45–52.
7. Merchant, K.A., & Van der Stede, W. (2018). *Management Control Systems: Performance Measurement, Evaluation and Incentives*. Monograph. London: Pearson Education. 784 p.
8. UK Higher Education Funding Council. (2019). *Accounting for Further and Higher Education Institutions: Statement of Recommended Practice (SORP)*. London: UK Higher Education Funding Council. 162 p.