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The role of testing and assessment in educational management: A lever for decision-making and quality enhancement

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Abstract

In the context of modern education, testing and assessment (T&A) is no longer limited to determining learners' academic outcomes but has become a strategic management tool. This article focuses on analyzing the multifaceted role of T&A activities in educational management. Through documentary research methods, the article explains how data from T&A provides objective evidence for policy formulation, serves as a lever for improving training programs and teaching methods, provides a basis for effective resource allocation, and forms the core foundation of educational accountability. The analysis results show that the transition from experience-based management to data-driven management through T&A results is an inevitable trend, helping to enhance transparency, effectiveness, and overall quality of the education system.

Keywords: Testing, assessment, educational management, educational quality, accountability

Introduction

Education is facing increasingly high demands for quality and effectiveness in the context of globalization and socio-economic development. To meet these requirements, educational managers need to make timely, accurate decisions based on solid scientific foundations. Traditionally, testing and assessment (T&A) activities have often been viewed as the final stage of the teaching process, mainly for classification and recognition of student results. ^[1]

^[2] However, this concept is no longer appropriate.

Currently, T&A is recognized as an organic component and the "locomotive" of the training process, with a dual function: both evaluating the achievement level of educational objectives and providing feedback information for adjusting and improving all activities. ^[3] For managers, data collected from T&A is not just numbers about academic achievements but also valuable management information. They provide objective evidence about the actual quality of teaching and learning, the effectiveness of training programs, teacher capacity, and learner needs. Effective exploitation and use of this data source help managers transition from making decisions based on intuition and experience to making evidence-based decisions, a core requirement in modern educational management. ^[4]

There are many works worldwide and in Vietnam studying the role of testing and assessment in educational management. Specifically:

Black, P., & Wiliam, D ^[5] although focusing on classroom assessment (formative assessment), this work has profound influence on management. This work pointed out that improving educational quality must start with supporting teachers to conduct effective assessment. For managers, this work emphasizes their role in creating a supportive culture, providing professional development for teachers on assessment skills, considering it as a core management strategy to improve teaching and learning quality.

Stiggins, R. J. ^[6] clearly distinguishes between "assessment of learning" and "assessment for learning." He argues that the education system is overly focused on testing for ranking while neglecting the potential of assessment as a tool to help students improve. For management, this work is a call to change policy focus and resource investment, shifting from using assessment only to "measure" to using assessment to "improve."

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Or like the group of works on using assessment data for policy and management focusing on how managers at all levels use data from assessment periods to make decisions such as: OECD ^[7] this work provides a comprehensive framework on how countries can combine assessment forms (student assessment, teacher assessment, school assessment) to create a synchronized quality management system. It provides practical examples from many countries, showing how policymakers use assessment data to identify areas needing reform, allocate budgets, and monitor the effectiveness of educational policies.

Murnane, R. J., & Willett, J. B. ^[8] although being a research methodology book, it has great influence on evidence-based management. The authors point out the importance of using data (including assessment data) scientifically to draw conclusions about the effectiveness of a policy or intervention program. For managers, it emphasizes that not all data is useful, and analytical capacity is needed to turn data into correct management decisions

In Vietnam, studies often focus on applying theories to the specific context of Vietnamese education, especially at the school management level such as:

Nguyen Cong Khanh ^[9] this is one of the documents that comprehensively systematizes theoretical and practical issues about T&A oriented towards competency development, closely linked to the 2018 General Education Program, analyzing the role of T&A not only for teachers and students but also for management staff in directing educational innovation at the grassroots level.

The doctoral dissertation of Can Thi Thanh Huong ^[10] this study focuses on assessing the current situation of managing testing and assessment (T&A) activities in Vietnamese higher education, to identify new requirements from society and the education system itself. Based on that, the work proposes synchronized, highly feasible management solutions to improve the quality and effectiveness of T&A activities, suitable to Vietnam's practical context.

The doctoral dissertation of Le Thi Phuong ^[11] this study has dual contributions, both theoretical and practical, to managing assessment according to the CDIO approach. Theoretically, the dissertation has built a comprehensive theoretical framework for managing learning outcome assessment activities according to CDIO. Practically, the work deeply surveys and evaluates the current situation at Ho Chi Minh City National University, thereby pointing out strengths and weaknesses and proposing specific management measures for this unit.

In the article by author Cai Thi Thuy Trang ^[12] focusing on the general education context and closely linked to current innovation requirements. Based on theoretical research and surveys of the current situation at secondary schools in Phu Loc district, Thua Thien Hue province, the article has proposed specific and practical management measures to help schools here manage testing and assessment activities more effectively, meeting the objectives of the new general education program.

Based on analysis and synthesis, this article will recreate the process of T&A from a professional activity to a strategic management tool and an active "lever" for decisions. Through systematizing the roles of T&A into a unified cycle, the article provides scientific arguments for transitioning to an evidence-based educational management model in Vietnam, where T&A plays a central role.

Research Methods

The article uses documentary research methods. The author conducts review, analysis, and synthesis of information from research works, scientific articles in specialized journals, state legal documents, and reports from reputable educational organizations domestically and internationally. These documents are analyzed to clarify theoretical and practical aspects of the relationship between T&A activities and management work, thereby building scientific arguments about the role of T&A in formulating and implementing educational decisions.

Research Results and Discussion

Through document analysis, the role of T&A in educational management can be clearly seen in the following four main aspects:

Providing Objective Evidence for Decision-Making

The most fundamental and essential function of testing and assessment (T&A) activities for managers is to provide a compass for orientation, a comprehensive and multi-dimensional objective picture of the education system they are responsible for. Instead of having to make decisions based on subjective reports, which may be embellished or not fully reflect reality, managers now have unquestionable quantitative and qualitative data sources. This data source is systematically collected from exams, periodic tests, and especially large-scale assessment surveys. These allow managers to scientifically determine what are the strengths to be promoted and what are the core weaknesses that need intervention. ^[13]

The power of T&A data is most clearly shown in its ability to "illuminate" and dissect latent problems. For example, detailed analyses can point out deep gaps in educational quality between different regions, or significant differences in learning outcomes between public and private school types. Data can also precisely locate knowledge and skill gaps in a specialized subject or specific grade level, such as logical thinking capacity of students at the end of lower secondary school or experimental practice skills of 11th-grade students. ^[14] This is "telling" information that general reports cannot provide.

From these authentic and detailed evidence, managers' decision-making processes become more accurate and targeted than ever. They can confidently decide where to prioritize budget allocation for investment, which units really need technical support and professional development, or which macro policies need to be promulgated or adjusted to fundamentally solve identified problems. ^[15] Thus, T&A not only provides information but also gives managers a powerful tool to create change effectively and with a solid foundation.

Lever for Improving Training Programs and Teaching Methods

Testing and assessment (T&A) plays an important role as a scientific feedback mechanism, providing valuable information for improving training programs and teaching methods. ^[16] ^[17] According to modern educational assessment theory, T&A results not only reflect learners' achievement levels but are also important data sources for evaluating the effectiveness of the entire education system. Regarding training program improvement, T&A results provide empirical basis for identifying inadequacies in

teaching content. When analyzing learners' academic results, educational managers and subject specialists can identify content with difficulty levels inappropriate to the cognitive level of learners, knowledge that has become outdated or lacks practical application in the modern social context.^[18] Balancing the systematicity of theoretical knowledge and practical application capability is always a challenge in educational program design. From these analyses, competent authorities can make necessary adjustments to ensure training programs both adhere closely to set educational objectives and meet society's development needs.^[19]

Simultaneously, T&A also functions as a diagnostic tool for improving teaching methods. When assessment results show learners are still limited in specific skills such as critical thinking, information analysis and synthesis ability, or skills in applying theory to solve practical problems, this is a warning signal about inadequacies in current teaching methods.^[2] Based on these findings, educational management agencies can develop and implement professional development programs and teaching methodology training for teachers. Particularly, encouraging the application of active teaching methods centered on learners not only helps overcome identified weaknesses but also comprehensively improves teaching quality.^[20]

Thus, T&A is not merely a tool for measuring learning outcomes but also an important driving factor promoting continuous innovation and improvement in education. This multifaceted role of T&A contributes to sustainable and effective educational quality enhancement.

Tool for Effective Resource Allocation and Utilization

In the context where resources for education are always limited, the problem of allocating them reasonably and fairly is always a major challenge for managers. Data from testing and assessment (T&A) activities has provided a scientific solution to this problem, replacing experience-based decision-making with a process based on solid evidence. Instead of relying on qualitative reports, data from T&A allows managers to "diagnose" and draw a comprehensive, objective picture of the educational situation.

Through this, areas and schools with systematically low results will be clearly identified, becoming priority targets for investment in infrastructure, modern teaching equipment, or needing reinforcement by excellent teachers.^[13]^[15] This approach helps direct resource flow to the right "valleys" of quality that need the most support, instead of scattered and ineffective investment.

Furthermore, the role of T&A does not stop at identifying where to invest. It is also a powerful tool to measure and prove the effectiveness of those very investments. Specifically, for budgets allocated to training, assessment results of learners' competency before and after courses become vivid evidence, showing whether the investment has truly brought benefits and progress to learners and met enterprise requirements or not.^[16] In this way, resource allocation not only ensures fairness in education, directing support to where it is most needed, but also helps optimize the efficiency of using every budget dollar, ensuring all investments create sustainable value.

Foundation of Educational Accountability

In the context of modern educational management, the concept of accountability has become an inevitable

requirement and one of the most important pillars. This requirement becomes even more urgent when the trend of decentralized management and granting autonomy to educational institutions is increasingly promoted.^[21]^[22] When granted more power in deciding on programs, personnel, and finances, schools must also bear a corresponding obligation: proving the effectiveness and quality of their operations.

Specifically, educational institutions, from kindergarten to university, must be responsible for transparently demonstrating and reporting their training quality to many stakeholders. That is responsibility to the whole society for using public resources, responsibility to parents and learners themselves for the educational quality they receive, and simultaneously responsibility to higher-level management agencies for implementing set objectives.^[23]^[24] To fulfill this responsibility, promises or qualitative reports are not enough; society demands objective evidence that can be measured and compared.

And here, results from testing and assessment (T&A) activities are the most crucial and convincing source of evidence. Particularly, results from quality accreditation conducted by independent organizations carry special weight, as they ensure objectivity and impartiality, becoming the most important "passport" for an educational institution to fulfill its accountability responsibility.^[18]

The responsible publicization of these T&A results creates a series of positive impacts. It not only breaks down insularity, enhances transparency in educational sector operations, but also creates positive pressure, healthy competitive motivation, forcing educational institutions to continuously strive for improvement to enhance quality. Simultaneously, it provides society and parents with an effective monitoring tool, helping them have a solid basis for choosing learning environments and participating together in the process of monitoring and evaluating sector activities. Thus, T&A has transcended its purely professional role to become the core foundation, the backbone of accountability mechanisms in modern education. Thus, the research results of this article have systematically affirmed that testing and assessment (T&A) is no longer an independent, separate activity but has truly become the nerve center of modern educational management work. The four analyzed roles-providing evidence for decisions, lever for program improvement, resource allocation tool, and foundation of accountability-do not exist separately but have dialectical, mutually supportive relationships. Objective data (role 1) is the premise for identifying inadequacies in programs and teaching methods (role 2), thereby making accurate resource allocation decisions to remedy them (role 3). This entire cycle creates a transparent mechanism for educational institutions to implement accountability to society (role 4).

This shift reflects a major trend in public governance worldwide: evidence-based management. However, applying this ideal model to Vietnam's educational reality also poses many significant challenges.

First, regarding data utilization capacity: The transition from experience-based management to data-driven management requires educational managers and teachers to have sufficient "data literacy"-that is, skills to collect, analyze, interpret, and use information from T&A effectively. Without this, no matter how abundant data is, it remains "dead" numbers, bringing no value to decision-making.

Second, regarding examination pressure: When T&A results are used as the main measure for accountability, it can create negative pressures. Schools may fall into the situation of "teaching to the test" instead of "teaching to develop human beings," narrowing educational objectives and inadvertently eliminating creativity in teaching and learning. Balancing between using T&A for management purposes and improving learning processes (assessment for learning) is a delicate equation that managers need to solve.

Third, regarding comprehensiveness of assessment tools: * The analyzed results mainly come from knowledge tests. Meanwhile, modern education objectives also include soft skills, qualities, critical and creative thinking capacity. How to have reliable T&A tools to measure these aspects and integrate them into the general management information system remains an open question.

Therefore, promoting the role of T&A is not only a technical issue but also a cultural and policy issue, requiring changes in thinking and action at all management levels.

From the above results and discussion, some new research directions can be opened to continue deepening this issue:

- Empirical research on data utilization capacity: There need to be large-scale surveys and assessments of the capacity to analyze and use T&A data of educational management staff at all levels in Vietnam. Results will be the basis for building appropriate and effective training and development programs.
- Research on unintended impacts of T&A: Longitudinal studies need to be conducted to analyze unintended impacts of using T&A results for accountability purposes (e.g., pressure on teachers, tutoring phenomena, curriculum narrowing). From there, propose monitoring mechanisms and policy adjustments to limit these negatives.
- Development and testing of new competency assessment tools Research and develop new T&A tool sets that not only measure knowledge but also assess core competencies such as problem-solving, creativity, cooperation. Then, research ways to integrate data from these tools into the general management information system.
- Case studies on evidence-based decision-making: Conduct in-depth case studies at some typical educational institutions or education departments/bureaus that have successfully applied using T&A data for decision-making. Analyze success factors, barriers, and draw lessons that can be scaled up.
- Role of technology and artificial intelligence (AI) in T&A: Research the potential applications of new technologies such as big data analysis and AI in automating the process of collecting and analyzing T&A data, providing early warnings and policy suggestions for managers.

Conclusion

Testing and assessment has transcended the professional scope of the classroom to become an indispensable macro management tool. It not only provides necessary data but also shapes how managers think and act. Results from T&A are objective evidence sources helping educational managers make practice-based decisions, thereby improving training programs, optimizing resource allocation, and effectively implementing accountability.

To maximize this role, synchronized investment is needed in enhancing the capacity of management staff and teachers in skills for analyzing, interpreting, and using assessment data. Simultaneously, it is necessary to build a culture where data is viewed as a valuable resource, and evidence-based decision-making is considered a core operating principle. Only then can T&A truly become a powerful lever, promoting sustainable development and comprehensive quality improvement of the education system.

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