RESEARCH ARTICLE

A reflection of financial stewardship in schools through fiscalizing behaviors of school heads in Samar, Philippines

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ABSTRACT

Effective fiscal management enables school leaders to strategically allocate funds for critical needs such as instructional materials, infrastructure, and staff development, directly impacting the quality of education. Proper fiscal management also promotes transparency and accountability, develop trust among stakeholders, including parents, teachers, and the community. This paper developed a fiscal management model applicable to academic institutions in the Philippines. This paper analyzed the fiscalizing behaviors of school heads (n=738) from 26 districts of the Schools Division of Samar, during the School Year 2022-2023. They were asked about their fiscalizing behaviors in five constructs: budget planning, formal review and approval, implementing the budget, monitoring of fund, and fund communication. Their responses from open ended questions were used to design a model that represented the leadership-system-change interaction through thematic nodes. Findings indicated that the school heads exhibited generally positive fiscal management behaviors, particularly excelling in fund communication, budget planning, formal review, budget implementation, and fund monitoring, indicating strong adherence to sound financial practices. However, they face challenges such as resource sufficiency, not enough MOOE, depletion of funds," and the urgent need of a building. Consequently, the model established the importance of collaborative leadership and strategic decision-making in school financial management. Strategic prioritization allows schools to allocate resources effectively, even in the face of challenges like budgetary shortfalls or unforeseen circumstances. Leadership behaviors can also be linked to the success of the fiscal management practices within their institutions.

Keywords: education management; fiscal management; fiscalizing behaviors; leadership; school heads

1. Introduction

The attainment of school goals requires effective fiscal management. It is imperative that school heads must be capable in financial aspects of management. School heads must receive proper training in school financing accounting, budgeting, and auditing to be able to react to adapt to changes in the educational systems brought on by the need for high-quality human capital on a worldwide scale^[1].

School heads face several financial management difficulties, including poor preparation of school financial statements, failure to identify cost variability and pertinent costs, financial shortages, spending

ARTICLE INFO

Received: 14 October 2024 | Accepted: 15 November 2024 | Available online: 29 November 2024

CITATION

Fabrao MCC, Pacadaljen LM. A reflection of financial stewardship in schools through fiscalizing behavior of school heads in Samar, Philippines. *Environment and Social Psychology* 2024; 9(10): 3165. doi:10.59429/esp.v9i10.3165

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above budget or failing to use allotted funds, underpayment of salaries, a lack of supporting documentation, and a lack of petty cash. In other words, because most school heads are hired based on their teaching records rather than their leadership potentials, they lack formal managerial training or management competence and struggle to manage the school budget^[2-5].

The fiscal management of school funds by heads of elementary and secondary schools in the Philippines faces potential complications due to the varied educational backgrounds of administrators and the rigorous demands of effective governance^[6]. The Governance of Basic Education Act of 2001, or Republic Act Number 9155, has significantly transformed the educational landscape by introducing a decentralized system through School-Based Management (SBM), which grants school heads greater autonomy over their financial and administrative decisions^[7]. This transition aims to enable school leaders to design decisions according to the particular requirements of their schools and communities, so augmenting the significance and effectiveness of education. This Act officially instituted the policy of School-Based Management, enhanced local decision-making, and augmented responsibility for improving the quality of Basic Education. It redefined the roles of numerous players in the education sector, including national and regional offices, to facilitate the autonomy of school leaders in operating their schools. This reform sought to enhance educational responsiveness to local community demands by empowering school leaders and increasing their accountability for results.

Considering the authority, school administrators are required to create the school budget and allocate funds based on the School Improvement Plan (SIP) and Annual Implementation Plan (AIP) to support educational initiatives and preserve a secure and healthy learning environment in schools^[8]. The DepEd Order Number 13, Series of 2016 was released by the Department of Education (DepEd) to operationalize RA9155, further decentralizing the educational system by allocating the Maintenance and Other Operating Expenses (MOOE) to purchase consumables and school supplies for teachers and students that are needed in the conduct of classes, pay for the reproduction of teacher-made activity sheets or exercises from the Learning Resources Management and Development System (LRMDS), finance minor facility repairs and rental and minor repairs of tools and equipment necessary for the conduct of teaching and learning activities^[9].

Fiscal management in schools faces significant challenges, as highlighted by the 2014 Commission on Audit (COA) report. It revealed irregularities in the use of Maintenance and Other Operating Expenses (MOOE) funds, showing how school heads struggle to differentiate between MOOE and Special Education Fund (SEF) expenditures. These issues often arise from unclear guidelines and complex fund allocation rules, leading to non-compliance with financial management standards^[10].

To resolve these challenges, there is an urgent necessity for improved training and support mechanisms that assist school leaders in comprehending and executing best practices in financial control^[11]. Establishing comprehensive monitoring and evaluation frameworks is essential for ensuring transparency and accountability in the utilization of school funding^[12]. By enhancing fiscal management procedures, school leaders can more efficiently advance the primary objective of delivering high-quality education, ensuring that financial resources directly underpin educational priorities and enhancements.

This study aimed to develop a Fiscal Management Model specifically for the Division of Samar by evaluating the competencies of school leaders in budgeting, accounting, and asset management. This strategy aims to improve financial governance in schools, ensuring that educational goals are achieved effectively and efficiently. Ultimately, it will equip school leaders with essential tools to proficiently manage financial resources, hence enhancing the overall quality of education in their institutions.

2. Literature review

Management is the process of leveraging both human and material resources to achieve predetermined goals of an organization^[13]. Havidz and Suprapto^[14] define it as the process of completing tasks successfully with and through other people. In order to set and achieve educational objectives, Kaehler and Grundei^[15] also saw management as the planning, coordinating, inspiring, and controlling process. They saw management as the process of working with and through people and other organizational resources to achieve organizational goals.

Chemweno^[16] claim that of the management functions, the school financial management duty of school heads is the most difficult since it entails financial planning and implementation, accounting, reporting, and the safeguarding of assets against loss, destruction, and fraud. Financial management, in the context of education, refers to the process of ensuring that administrators plan, organize, delegate, and control the school's resources in order to meet its objectives^[17,18]. It is viewed as a more comprehensive management framework that considers all stakeholders. Finding alternative sources of funding and ensuring that they aid in the achievement of the organization's goals are also important aspects of financial management^[19]. Therefore, accurate financial report documentation demonstrates competent and efficient financial management.

Eight principles of integrity, efficiency, educational quality for all students, financing adequacy and equity, public involvement, transparency, responsibility, and competence and professionalism serve as the foundation for a sound fiscal management^[20]. They further asserted that effective financial management guarantees that all schools and programs have access to enough resources to offer all students a high-quality education, and that policies and practices guarantee the equitable distribution of resources to students while considering both their specific needs and the varied and circumstances of schools and districts. Fiscal management systems must encourage the public to significantly and broadly engage in the process of developing, executing, and monitoring budgets^[21]. In line with this though, schools must create and execute a fiscal management system that gives information about the financial and accountability systems that is simple to understand for parents and other community members^[22].

In managing a school, school leaders are a crucial human resource. In this case, it is necessary to compel school heads to carry out effective financial management to ensure universal access to education within the constraints of available funds^[3,23]. The school heads are undoubtedly the financial managers in their respective schools^[24]. Merano^[25] believed that a competent school head should spearhead the success of the school through their knowledge, skills, and abilities in using the school's finances.

It is evident that good financial resource management that promotes sustainable development is crucial for any educational institution's success in providing high-quality education^[26]. In this case, school heads must make the best use of the financial resources to promote education while upholding financial effectiveness, efficiency, equity, responsiveness, relevance, and sustainability, which will eventually guarantee the effectiveness of the teaching and learning process in secondary and elementary schools^[27]. In fact, good financial management by school heads is still essential for advancing high standards in education and achieving the school's vision and mission. If the necessary school resources are provided in terms of physical infrastructure, curriculum, and human resources, then quality education can be attained^[28].

Most importantly, school heads are expected to have financial abilities as the institution's financial managers, including the ability to locate different sources of funding for daily financing of both academic and extracurricular activities^[4,23]. The most crucial prerequisite for the successful implementation of the curriculum and the provision of high-quality education is their capacity to create sufficient financial

resources^[2]. Indeed, rather than solely relying on government capitation, school leaders with financial mobilization skills create additional funds to guarantee an appropriate supply of teaching and learning materials for their specific schools.

School heads have five management responsibilities as the financial managers of their respective institutions: planning the budget, reviewing and approving the budget, implementing the budget, monitoring and analyzing the use of funds, and communicating how funds are utilized.

With regards to financial planning, the International Monetary Fund (IMF)^[29] stressed the importance of having an in-depth understanding of the budget planning and preparation system to generate expenditure predictions and provide guidance to decision-makers on the viability of various budgetary proposals. Thus, creating a budget is the first stage since it establishes in advance what the educational organization hopes to accomplish and how it will go about doing so^[30,31].

Meanwhile, the responsibility of formal review and approval of budget falls to the school heads when the financial plan for the institution has been developed. This stage is referred to as the transition from general and open-ended planning processes to more formal and internal implementation processes^[20]. They also saw this stage as being more internal and mechanical because it entails checking the budget for accuracy and completeness before submitting it for approval. State legislation and the local school board, who make up the lowest administrative tier, both set the requirements for budget approval^[32].

Implementation is crucial after the budget is planned, reviewed, and approved. Johnson and Malhoit^[20] state that a budget guides school administrators in ensuring the learning environment meets both student and community needs. Without proper implementation, educational needs may go unmet, resources misallocated, and decision-making may become autocratic. Akhter et al.^[33] add that implementation involves allocating and managing funds according to the budget, with school leaders ensuring transparency by allowing stakeholders to track expenditures and ask questions.

Internal and external stakeholders keep an eye on the budget and expenses throughout this phase. Annual audits and program evaluations make it easier to judge the value of certain programs and the funding allotted for them^[34]. As one of their most important responsibilities as financial managers, school heads must be vigilant in efficiently monitoring and assessing the school budget, requiring them to manage limited school resources by concentrating on school priorities. For Nwafukwa and Sunday^[35], to improve the quality of instruction and student learning, school administrators ought to take on the role of internal auditors, examining the school's revenue and expenses and confirming the financial accounts.

Finally, school heads must also communicate with school stakeholders the use and management of school funds. Effective budget communication enables stakeholders, including staff, parents, and the community, to comprehend financial priorities and limitations, so promoting a sense of involvement and collaboration in decision-making processes. Furthermore, transparent communication on the budget mitigates misunderstandings, fosters accountability, and invites critiques, ultimately resulting in more efficient and educated financial decisions^[36,37]. Eventually, it enhances the organization's financial well-being by aligning financial strategies with the requirements and expectations of all stakeholders^[38].

Although extensive research has been conducted on the practices of school heads in fiscal management, there remains a need for a more in-depth analysis of how these practices manifest in specific contexts. This paper aimed to explore the fiscalizing behaviors of school heads in the Schools Division of Samar during the School Year 2022-2023. The study focused on five fiscal behavior constructs: budget planning, formal review and approval, budget implementation, fund monitoring, and fund communication. The study sought

to offer insights that could augment the efficacy of fiscal management techniques in educational institutions, consequently encouraging enhanced financial health and educational outcomes.

3. Research questions

This paper wanted to understand the fiscalizing behaviors of school heads in Schools Division of Samar, during the School Year 2022-2023. This paper was expected to shed light the actions and strategies of school heads in managing their respective academic institutions through 5 fiscal behavior constructs: budget planning, formal review and approval, implementing the budget, monitoring of fund, and fund communication. Below are the specific research questions sought to be answered in this study.

What are the fiscal management behaviors of the school head-respondents?

What are the challenges encountered by the school head in managing school's financial resources?

Based on the findings, what possible fiscal management model for the school heads can be established?

4. Theoretical framework

4.1. Behavioral leadership theory

The behavioral leadership theory emphasizes that leadership is defined by functional behaviors that positively influence others within an organization^[39,40]. This framework aims to identify and classify actions that enhance leader effectiveness. The early studies in this area, particularly the Ohio State and Michigan leadership studies, laid the foundation for understanding leadership behaviors^[41]. The Ohio State studies, starting in 1945, identified two key factors: personal consideration, which refers to a leader's ability to build trust and respect with followers, and initiative, focusing on setting goals and organizing tasks^[42]. Similarly, the Michigan studies in 1947 distinguished between two leadership styles: person-oriented behavior, which emphasizes employee development and satisfaction, and work-oriented behavior, which focuses on productivity and task accomplishment^[43]. Both sets of studies argued that person-oriented leadership tends to yield more effective outcomes in terms of employee satisfaction and performance^[43,44].

Further contributions to the behavioral leadership paradigm include McGregor^[45] X and Y theories, which described two contrasting leadership assumptions: Theory X, which assumes people inherently dislike work and require control, and Theory Y, which posits that people are self-motivated and thrive in environments that foster personal development^[43]. Additionally, Likert's System 4 model expanded on the Michigan studies by categorizing leadership into four styles based on the level of trust, freedom, and involvement of subordinates: abusive autocratic, benevolent autocratic, participatory, and democratic. Likert's research demonstrated that the participatory and democratic leadership styles correlated with higher productivity, while the autocratic styles were associated with lower productivity^[43]. These studies collectively suggest that leadership effectiveness is deeply rooted in the behaviors leaders exhibit, particularly in their interactions with followers, and the need for leaders to develop and refine behaviors that support both organizational goals and employee well-being^[41,46,47].

4.2. Systems theory

Systems theory has evolved through several foundational stages, beginning with the machine model, which draws heavily from mechanical engineering and natural sciences, particularly physics. In this early conceptualization, systems are viewed as closed entities that function predictably through linear causality, much like machines. This deterministic framework, seen in Pierre Laplace's world-machine concept, positions the system as a static entity where the future is entirely determined by past states^[48]. Such thinking

also underpins early organizational theories, like Max Weber's bureaucratic model, which saw organizations as efficient machines composed of specialized parts^[49]. Over time, cybernetics expanded on this view by introducing the notion that systems are not isolated from their environment but engage in constant feedback loops with external forces. This idea, developed by Norbert Wiener^[50], emphasized how systems self-regulate through feedback—either positive or negative—transforming environmental inputs into internal processes. The distinction between system and environment thus became a core element in understanding organizations as open, adaptive systems, which was further developed in the works of Miller and Rice^[51] and Emery^[52]. Cybernetic principles, such as selective feedback and adaptation, helped shift the view of organizations from static entities to dynamic, interconnected structures.

The next significant development in systems theory was the shift to non-linear dynamics, which moved beyond the predictable regularities of cybernetics to account for systems that display unpredictable yet structured behaviors. The study of chaos theory^[53] and dissipative structures^[54] introduced the idea that complex systems can generate new forms of order from apparent disorder. These systems, often studied in physics and chemistry, have since been applied to areas such as psychology and organizational behavior^[55,56]. The concept of self-referential closure, explored by Maturana and Varela^[57], further expanded the scope of systems theory by suggesting that systems create order from environmental noise through self-observation and differentiation. This approach has been influential in understanding the emergence of complex adaptive behaviors in social systems. Complex Adaptive Systems Theory (CAST) has built upon these insights to explain how leadership emerges from the interactions of individuals within a system, rather than from any single leader's behavior^[58,59]. CAST emphasizes the "space between" individuals and focuses on meso-level interactions within organizations to understand how leadership and organizational order emerge through the interdependent behaviors of agents, rather than solely from top-down authority^[60,61]. This dynamic view of systems offers a more fluid, interaction-based understanding of leadership, shedding light on how complex organizational behaviors emerge and evolve^[62,63].

4.3. Theory of change

The Theory of Change (ToC) development process is inherently complex and often fraught with challenges. As per Connell and Kubisch^[64], creating a ToC through a collaborative process can be as difficult as it is promising. While the ToC offers a roadmap for understanding how interventions are expected to lead to desired outcomes, its development requires careful attention to political negotiations, conflict resolution, and iterative refinement. Connell and Kubisch^[64] also note that ToCs are typically framed at a general level, which can make it difficult for evaluators to determine when enough detail has been gathered. Cole^[65] extends this discussion by offering techniques for constructing ToCs, particularly in the context of public health interventions. A well-articulated ToC, when developed appropriately, helps evaluators understand how program activities contribute to long-term outcomes and provides a shared understanding among stakeholders, which is essential for the design of effective evaluations^[66,67].

In practice, ToCs serve as foundational tools in evaluation, particularly for establishing a shared understanding of program goals and expected impacts^[68]. In the U.S., ToCs have traditionally been used in community initiatives to facilitate collaborative program planning, while in the UK, they are more often employed in government evaluations where expertise is prioritized, sometimes leading to a more researcher-led process^[69]. However, Marris and Rein^[68] and Downe et al.^[70] observe that retroactive ToC development—typically done by evaluators after a program has already begun—can overlook the perspectives of key stakeholders, risking a lack of true consensus and distorting the program's evaluative framework. Hence, Funnell and Rogers^[71] described ToC as a detailed description of how a program's activities are understood to lead to a series of results that contribute to the desired final impacts. They further

note that the ToC process can build relationships among stakeholders, foster evaluation ownership, and guide the selection of appropriate evaluation criteria. Rogers^[72] elaborates that a ToC helps to articulate the program's intended functions and the needs it seeks to address. King^[73] further stresses the role of ToC in refining program understanding and aligning it with the needs it aims to meet.

5. Methods

5.1. Research design

This paper was a quantitative study which aims to develop a fiscal management model for school heads in elementary and secondary schools in the Schools Division of Samar. The descriptive design was used as this study aimed to describe the fiscal management practices of the school head-respondents in terms of planning the budget through School Improvement Plan and Annual Implementation Plan, formal review and approval of the budget, implementing the budget, monitoring and evaluating the expenditures of funds, and communicating how funds are used. In addition, this study aims to describe the challenges encountered by the school head-respondents in managing their school's financial resources, and the profile of the school head-respondents in terms of their age, sex, civil status, average monthly income, highest educational background, number of years as school head, number of schools supervised, and relevant in-service trainings attended. Finally, this research determined how the school head-respondents' fiscal management practices were related to their profile variates.

5.2. Participants and sampling

The respondents of the study were the school heads of the different public elementary and secondary schools in the 26 districts of the Schools Division of Samar, during the School Year 2022-2023. These school heads were classified in terms of their area of assignment, in levels, i.e., Elementary, Secondary and Integrated School. The number of school heads per level is shown in **Table 1**.

Level	Frequency	Percent
Elementary School	636	86.18
Integrated School	32	4.34
Secondary School	70	9.49
Total	738	100.00

Table 1. Population by school levels.

Total enumeration was used to secure the respondents of this study using the following inclusion criteria: (a) the school head must be a principal, head teacher, or teacher-in-charge handling school(s); (b) the school head must be handling a school, either central or non-central school in any of the capacities mentioned in the preceding criteria; (c) the school head must be handling at least three teachers; and (d) the school head must have been in the position for at least two successive school years.

5.3. Research instrument

The questionnaire was a standard research instrument that was adopted from the tools of School-Based Management.

The first part of the questionnaire consisted of items on the profile of the school head-respondents, specifically their age, sex, civil status, average monthly income, highest educational background, number of years as school head, number of schools supervised, and relevant in-service trainings attended.

The second part of the questionnaire was a checklist composed of 25 statements that reflected the fiscal management practices of the school-head respondents along planning the budget, formal review and approval of the budget, implementing the budget, monitoring and evaluating the expenditures of funds, and communicating how funds are used. The statements included in the checklist were adopted from Johnson and Malhoit (2004). The school head-respondents were tasked to place a check mark on the appropriate column of their responses using the following five-point scale: 5 (Very Highly Practiced), 4 (Highly Practiced), 3 (Moderately Practiced), 2 (Fairly Practiced), and 1 (Least Practiced).

The third part of the questionnaire was a checklist consisting of 17 statements that reflected the challenges encountered by the school head-respondents in managing their school's financial resources. The statements in this checklist were adopted from Yizengaw and Agegnehu^[74]. The school head were tasked to rank the challenges from the least challenging to the most challenging using the numbers 1 to 17, and were likewise tasked to place a check mark on the column which corresponded to their responses using the following five-point scale: 5 (Very Highly Challenging), 4 (Highly Challenging), 3 (Moderately Challenging), 2 (Fairly Challenging), and 1 (Least Challenging).

The questionnaire was validated only with regard to its content through expert validation in as much as the second and third parts of the questionnaire were adopted from standard sources.

6. Results

Question 1: What are the fiscal management behaviors of the school heads?

This paper analyzed the characteristics of school heads' fiscal management behaviors by examining five key constructs: budget planning, formal review and approval, budget implementation, fund monitoring, and fund communication. The descriptive analysis in **Table 2** revealed that school heads from the Schools Division of Samar, Philippines demonstrated generally positive fiscal management behaviors ($\bar{x} = 3.768$), indicating a strong adherence to sound fiscal practices across these dimensions.

Specifically, school heads were found to highly practice budget planning ($\bar{x} = 3.63$), a crucial first step in ensuring that financial resources are allocated effectively in alignment with the schools' goals and needs. They also exhibited strong competence in the formal review and approval processes ($\bar{x} = 3.72$), ensuring that budgets are critically evaluated and authorized before implementation.

Moreover, the implementation of the budget $(\bar{x}=3.76)$ was another area where school heads displayed a high level of proficiency, signifying their ability to execute the planned expenditures efficiently. They also demonstrated notable competence in the monitoring of funds $(\bar{x}=3.75)$, reflecting a consistent focus on tracking expenditures and ensuring that funds are used as intended. Lastly, the highest score was observed in fund communication $(\bar{x}=3.98)$, where school heads showed exceptional ability to communicate financial matters effectively, fostering transparency and accountability within their schools.

These findings suggested that school heads in this division exhibit a commendable level of fiscal management competence across all constructs. They were not only proficient in technical aspects of budgeting but also emphasize communication and accountability, which are critical for maintaining trust and efficiency in the management of school resources.

Table 2. Descriptive summary of fiscal behavioral constructs.

Fisal Behavioral Constructs	Mean (\overline{x})	Description
Planning the Budget	3.63	Highly Practiced
Formal Review and Approval of the Budget	3.72	Highly Practiced

Implementing the Budget	3.76	Highly Practiced	
Monitoring and Evaluating the Expenditure of Funds	3.75	Highly Practiced	
Communicating how Funds are Used	3.98	Highly Practiced	
Composite	3.768	Highly Practiced	

Table 2. (Continued).

Note: 1.00–1.80 (Least Practiced); 1.81–2.60 (Fairly Practiced); 2.61–3.40 (Moderately Practiced); 3.41–4.20 (Highly Practiced); 4.21–5.00 (Highly Practiced)

Question 2: What are the challenges encountered by the school head in managing school's financial resources?

This paper used median scores to represent the rating of challenges based on the responses of school heads in 17 pre-identified fiscal management challenges. Median scores are highly effective when the data is not normally distributed. Similarly, the school heads were also asked the 17 challenges, 1-17 (1 being the most challenging), based on their experiences on fiscal management officers.

Findings presented in **Table 3** indicate that out of the 17 identified challenges 13 were rated highly challenging by the school heads and 4 were rated very highly challenging. The four which were rated very highly challenging include "Controlling and following up from administration, education and finance office" Experience of the school principals on budget preparation," and "Using auditing comment". These are also among the top seven challenges which the school heads considered as the most urgent challenges that needs to address immediately. The top seven urgent challenges that school heads believes must be addressed immediately with regards to fiscal management are: (1) "Controlling and following up from administration, education and finance office," (2) "Transparency on financial activities for the school community," (3) "Implementing financial guidelines, rules and regulations of finance at the school level," (4) "Experience of the school principals on budgetary control," (5) "Submitting financial utilization report," (6) "Using auditing comment," and (7) "Experience of the school principals on budget preparation."

Table 3. Challenges of school heads in managing financial resources.

Challenges	Median Rating	Description	Rank
Allocating of budget by other stakeholders (i.e., community participation, school internal income etc.)	4	Highly challenging	17
Disseminating financial reporting to concerned bodies on time	4	Highly challenging	15
Participation of concerned bodies in budget preparation	4	Highly challenging	16
Planning of financial budget of the school	4	Highly challenging	14
Reporting of financial budget by the school according to time schedule	4	Highly challenging	13
Skilled accounting personnel in relation to financial reporting	4	Highly challenging	12
Experience among school accounting personnel and other finance workers	4	Highly challenging	11
Training for school accounting personnel, auditors and other finance workers	4	Highly challenging	10
Reporting and documenting financial activities of the school	4	Highly challenging	9
Requesting budget within the schedule of the finance office	4	Highly challenging	8
Submitting financial utilization report	4	Highly challenging	5
Implementing financial guidelines, rules and regulations of finance at the school level	4	Highly challenging	3

Table 3. (Continued)

Challenges	Median Rating	Description	Rank
Transparency on financial activities for the school community	4	Highly challenging	2
Using auditing comment	5	Very highly challenging	6
Experience of the school principals on budget preparation	5	Very highly challenging	7
Experience of the school principals on budgetary control	5	Very highly challenging	4
Controlling and following up from administration, education and finance office	5	Very highly challenging	1

Table 3. (Continued).

Note: 1-Least Challenging; 2-Fairly Challenging; 3-Moderately Challenging; 4-Highly Challenging; 5-Very Highly Challenging.

Question 3: Based on the findings, what possible fiscal management model for the school heads can be established?

In **Figure 1**, the issue of "Adherence to Budgets" is a prominent theme, with multiple nodes highlighting issues like "Budget Allocation is Not Followed," "Exceeding Budget," and "Not Allowed but Essential Expense." These nodes reflect the tension that exists between the demands of the real financial situation and the budget that is prescribed, highlighting the challenge of strictly adhering to budgets when costs arise.

Another major issue is efficiency, with nodes such as "Long Process," "Delayed Payments of Obligations," and "Late Payment of Utilities" pointing out systemic inefficiencies that might impede the seamless running of the school's financial operations.

The theme of "Resource Sufficiency" is aptly illustrated by issues like "Not Enough MOOE," "Depletion of Funds," and the urgent "Need of a Building." These problems draw attention to the crucial problem of resource constraints that schools face and the effect that these constraints have on their capacity to accomplish instructional and operational goals.

Cross-cutting topics like "Overlapping Activities" and "Delayed Program Implementation" highlight the interdependencies and complexity of financial management, where choices made in one area can have repercussions in other areas.

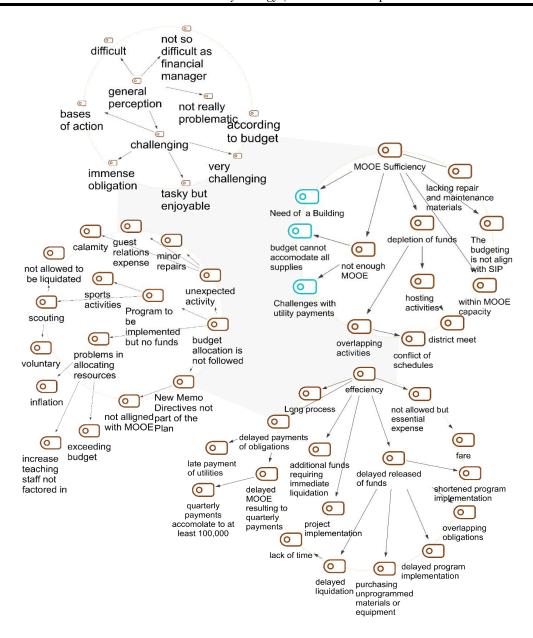


Figure 1. Fiscal management challenges experienced in schools.

Question 4: Based on the findings, what possible fiscal management model for the school heads can be established?

The importance of leadership techniques for strategic financial management in a school setting is illustrated in **Figure 2**. The "Leadership" core node is linked to "Self Capacitating," indicating that leaders should concentrate on enhancing their own abilities and knowledge in order to essentially give themselves the authority to make independent financial decisions. In an educational setting where financial decisions can directly affect student results, this empowerment is critical.

The concept of "Collaborative Teamwork" is evident in nodes such as "Working as a Team" and "Community Involvement," encompassing interactions with stakeholders like "PTA" and "Alumni Association." These linkages imply that cooperative efforts and group input are beneficial for financial

management in schools, as they distribute accountability and provide a range of viewpoints to guide financial strategies.

Financial executives must deliberately deploy limited resources to optimize their influence. This is seen in nodes like "Prioritization" and "Budgeting within the Allowed MOOE," which are examples of "Strategic Prioritization." The prioritization process, as demonstrated by "Paying Obligations First" and "Not Allowed Expense," highlights the necessity of coordinating spending with legal requirements and educational priorities.

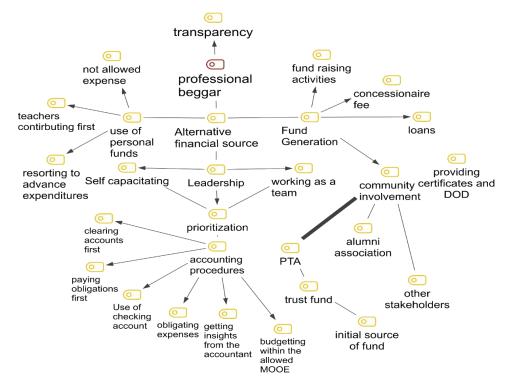


Figure 2. Role of leadership in fiscal management.

The key node of "Transparency" represents "Comprehensive Transparency," which is further emphasized by actions that promote accountability and openness of financial transactions, like "Providing Certificates and DOD" and "Checking Account Use."

The node "Professional Beggar," with which respondents are uncomfortable associating themselves, captures the difficulties and occasionally unsettling realities that school financial leaders encounter when trying to raise money. It highlights the sometimes drastic steps that administrators could feel forced to take in order to meet the financial demands of their school. Elucidating *Professional Beggar*:

"I also struggle with the fact ...each agency has its own funds and expenses or its own budget to spend on running their agency. Of course, I don't want to be seen as a professional beggar. It seems wrong that I went to school to become a professional teacher just to beg for things, to ask politicians A, politician B, or anyone else for help."

As a whole, the theme illustrates strategic financial management in an educational setting, which depends on competent, self-sufficient leadership, the capacity to collaborate with multiple stakeholders, the ability to make well-informed decisions about the distribution of funds, and the maintenance of transparency

throughout the financial processes. These procedures work together to create a thorough strategy for responsibly and successfully managing school funds; they are not stand-alone procedures.

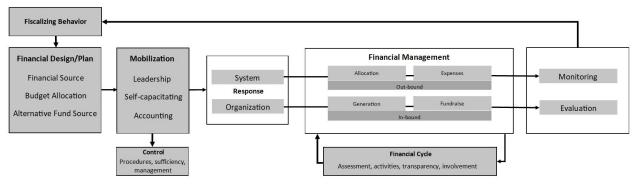


Figure 3. Financial stewardship in schools through fiscalizing behaviors.

The Financial Stewardship Model in schools is a cyclical process (**Figure 1**) designed to ensure responsible and effective management of financial resources. It begins with Fiscalizing Behaviors, where school heads take an active role in promoting accountability, transparency, and fiscal responsibility. This initial stage sets the tone for all financial activities within the school, guiding the development of a Financial Design/Plan that aligns with educational goals and budgetary constraints. For example, at its core are collaborative governance ("Working as a Team") and leadership competence ("Self-Capacitating"), which promote shared decision-making, collective accountability, and effective resource use. This teamwork-driven approach highlights how financial management in schools is strengthened when leaders and staff work together, leveraging the expertise of all parties.

Mobilization involves the leadership team, which includes school administrators, self-capacitated staff, and accounting personnel, actively coordinating resources to execute the financial plan. Here, the emphasis is on ensuring that each member of the leadership team has the skills and knowledge necessary to make sound financial decisions. Through mobilization, financial resources are directed toward specific needs, such as educational programs, maintenance, and improvements, while keeping in mind the principles of efficiency and sustainability.

Response phase reflects where the established financial systems and organizational structures respond to emerging needs and priorities within the school. This dynamic adjustment represents the institution's adaptability in managing finances amid changing circumstances or requirements. In the context of strategic prioritization, financial choices involve nodes like "Prioritization" and "Budgeting within the Allowed MOOE." These represent a structured method of deciding resource allocation based on a careful assessment of school goals and educational priorities. For example, when faced with budget constraints such as "Insufficient MOOE" or urgent demands like a "Need of a Building," strategic prioritization ensures funds are channeled where they are most impactful, thus avoiding compromises in education quality.

The Financial Management stage then oversees both in-bound (incoming funds) and out-bound (expenditures) financial transactions, ensuring a balanced approach to resource allocation and spending. The in-bound aspect includes the receipt and management of various funding sources, such as government allocations, grants, donations, and income generated from school-based activities. Each source is accounted for and allocated according to the school's financial plan, ensuring that funds are directed toward high-priority areas that align with the institution's educational goals and operational needs. On the outbound side, expenditures are closely monitored and controlled to prevent overspending and to ensure that funds are used efficiently. Outbound transactions cover a wide range of expenses, including salaries, infrastructure

maintenance, educational materials, utilities, and other operational costs. Each expenditure is assessed against the financial plan and evaluated for its necessity and alignment with school objectives. This monitoring helps to prevent wasteful spending and enables school leaders to adapt their budgetary allocations if unexpected needs arise.

As the cycle progresses, Monitoring and Evaluation involves assessing the effectiveness of financial practices. By tracking performance indicators and reviewing financial outcomes, school administrators can identify areas for improvement, ensuring alignment with fiscal goals and compliance with regulatory standards. Fundamentally, this identifies efficiency challenges in school finance, including "Long Process," "Delayed Payments of Obligations," and "Late Payment of Utilities," which point to systemic inefficiencies that hinder smooth financial operations. Addressing these bottlenecks requires refining processes to avoid delays that can affect the school's operational efficiency. Hence, this is expected to feed back into Fiscalizing Behaviors, as school heads refine their financial oversight practices based on insights gained. This feedback loop creates a sustainable and responsible financial stewardship system that continuously adapts and improves, ensuring that school resources are managed to optimize educational outcomes and institutional integrity.

8. Discussion

This study was anchored on theories that were relevant to the capabilities of the school heads to manage their schools' financial resources as part of their financial management responsibilities. These theories included the Behavioral Leadership Theory by Lewin, Theory of Change by Weiss, and Systems Theory.

In Behavioral Leadership Theory, Kurt Lewin stressed that training and observation are two ways that people can become leaders^[75]. Quality leadership is a problem for school administrators since how they conduct themselves while carrying out their duties has an impact on how well their educational institutions operate^[76]. Since they interact directly with stakeholders from all socioeconomic backgrounds in their capacity as school leaders, they need to be adept in a variety of skills, including managing financial resources. The theory makes it clear that an effective institution requires sufficient funding and capable management. Because financial numeracy is a basic ability for school administrators, they must be able to manage resources and establish the goals, standards, and priorities of the institution. In the end, school administrators must be able to employ a variety of behavioral styles and select the appropriate style for each circumstance.

The ToC, originated from Peter Drucker, supported this study in as much as the financial management role of school heads is part of the decentralization process in the context of education, a transition from the centralized set-up of education. The School-Based Management (SBM) through the Basic Education Sector Reform Agenda (BESRA) transformed the educational system by making the schools the center of change and thereby empowering school heads with more leadership responsibilities^[77]. Oracion et al.^[78] stressed that because of the school heads' direct involvement in the day-to-day operations of the school and first-hand knowledge of the challenges facing schools, school heads act as vital link between educational objectives and school improvement initiatives. The school heads are, therefore, the agents of change in schools managing their finances to achieve the goals of education attuned to the provisions of Republic Act Number 9155 or the Governance for Basic Education Act of 2001, which states that they have the authority to "administer and manage personnel, physical and fiscal resources of the school, recommend staff development, encourage staff development, and accept cash donations" As a result, these school heads are responsible for ensuring efficient, effective, economical, and ethical operations of fiscal resources for the quality of learning outcomes and other school outputs^[79].

The theories discussed emphasize the shift in resource management that occurred as a result of the decentralization of the educational system, which granted greater authority to school heads. Prior to this, a centralized system dictated resource management practices. The theories also underscore the idea that the educational system comprises various interconnected components, meaning that changes to one part inevitably affect the others. Consequently, school leaders now function as financial managers at the school level, overseeing tasks such as budgeting and resource allocation, which directly influence the overall operations of the school.

In a theoretical nuance, using the theories *Behavioral Leadership Theory, Systems Theory, and Theory of Change*, the theme evidenced Systems Theory in the complexity of the financial system, where nodes like "Long Process of Disbursement" and "Problems in Allocating Resources" interact and impact the school's financial health. The model also illustrates the practical application of *Behavioral Leadership Theory*, where school leaders' varying perceptions of financial management tasks, ranging from "not really problematic" to "very challenging," showcase a spectrum of competence and confidence gained through engagement with activities like "Budget Planning" and "SIP/AIP Alignment." With nodes like "Calamity and Other Emergencies" and "Implementable within a year period." Theory of Change, on the other hand, emphasizes the need for adaptation, showing how the school must continue to be flexible in its financial planning to account for unforeseen circumstances.

Another theoretical anchorage that emerged in the study are Resource Dependency Theory^[80,81] and Efficiency Theory^[82]. Resource Dependency Theory^[83] clarifies how the school responds strategically to limitations like "Not Enough MOOE" and how to deal with "Depletion of Funds," emphasizing how important it is to manage and get necessary financial resources. Nodes like "Long Process" and "Delayed Payments of Obligations," which identify areas where financial procedures should be streamlined to improve efficiency, are where Efficiency Theory comes into play.

When these concepts are applied to the financial challenges of the school, an elaborate scenario emerges in which effective resource management and process optimization are essential for establishing robust financial practices in educational environments.

The Behavioral Leadership Theory suggests that good leadership characteristics may be acquired and cultivated^[46,84,85]. The model integrates leadership training and development to strengthen the capacity of school administrators in financial management, with a focus on the significance of proactive and strategic decision-making. Particularly, self-improvement and empowerment behaviors align with the "Self-capacitating" node. Leaders who invest in enhancing their own skills and financial acumen are better equipped to make informed, independent decisions that align with legal and educational priorities. Behavioral leadership theory advocates for such proactive behaviors, which encourage leaders to take ownership of their decision-making processes rather than relying on external sources.

In Systems Theory, it emphasizes the interdependence of different elements within an organization^[86,87]. The model advocates for a comprehensive approach to financial management, whereby each financial choice is evaluated in relation to the school's objectives, operations, and the demands of its stakeholders. This approach guarantees that the allocation of resources is optimized to achieve maximum efficiency for the entire system. Systems Theory encourages viewing resource prioritization (e.g., through "Strategic Prioritization") not as isolated budget decisions but as part of a dynamic system that balances educational priorities with legal and operational constraints.

In ToC, it delineates the intended results and the necessary actions to accomplish them^[64,88]. The approach provides a clear framework for school administrators to enhance their financial management

practices, starting with training and skill development, and progressing to the adoption of optimal strategies and ongoing oversight. In addressing the challenge of "Collaborative Teamwork," ToC can help visualize the positive long-term impact of stakeholder involvement (e.g., working with the PTA and alumni associations). The theory emphasizes the importance of involving all relevant parties to build a shared understanding of financial goals. By explicitly linking collaborative actions to specific outputs (e.g., improved financial strategies) and outcomes (e.g., greater school accountability and effective fund distribution), ToC can demonstrate how teamwork enhances the strategic management of school resources.

9. Practical implications

Grounded in Behavioral Leadership Theory, the study emphasizes leadership behaviors that encourage transparency, collaboration, and accountability, echoing the principles outlined in the Ohio State and Michigan studies, which prioritize personal consideration and work-orientation for effective organizational outcomes^[42,43]. These behaviors are particularly relevant in the "Fiscalizing Behaviors" phase, where school heads promote a culture of responsibility and fiscal integrity, aligning with the participative and democratic styles advocated by Likert's System 4 model, which has been shown to correlate with higher productivity and organizational cohesion^[41,43]. Such a behavior-oriented approach helps create a sense of shared responsibility among school leaders and staff, reinforcing effective resource use through collaborative governance and leadership self-capacitation.

Systems Theory provides a complementary perspective, viewing the school's financial operations as a dynamic system that interacts with both internal and external environments. The cyclical and adaptive structure of the Financial Stewardship Model aligns with cybernetic principles, where financial decisions are continuously refined through feedback loops^[50,51]. For example, the "Response" phase exemplifies how schools adapt to emerging needs and priorities, reflecting Systems Theory's notion of open systems that must respond to external challenges, such as limited funding or urgent infrastructure needs^[55]. The complexity of this financial process, from mobilization to response, resonates with CAST, which emphasizes how interdependent behaviors among team members lead to adaptive leadership and resource allocation in response to shifting educational priorities^[58,59]. Through this systems-based approach, schools can maintain a financial structure that both anticipates and responds to fiscal demands, ensuring sustainable outcomes.

In the model's "Monitoring and Evaluation" phase, ToC principles are applied to assess financial practices, which helps ensure that fiscal decisions meet intended outcomes and regulatory standards^[71,73]. This phase supports a cycle of refinement where insights from monitoring feed back into fiscal behaviors, similar to how ToC fosters program alignment through stakeholder collaboration and iterative improvement^[64,69]. Practical application of ToC here enables school administrators to evaluate the impact of fiscal decisions on educational quality, highlighting areas where strategic adjustments can better meet school objectives and operational needs^[72].



Figure 4. Word cloud describing financial management.

It was apparent in the literatures that limited understanding was available in the financial management of Philippine schools, and this manifested on the challenges that school heads experience. Figure 4 presents a word cloud that summarizes the context of financial management in Philippine schools. Blue keywords represent the core financial management processes essential for effective school operations. They involved a critical element including program development, activity planning, resource allocation, and facility maintenance, all aimed at enhancing the educational environment and supporting organizational success. For example, scheduling and budgeting for school events, workshops, and training sessions encourage forecasting costs, setting spending limits, and identifying funding sources to ensure all activities contribute to organizational development. Activity planning requires scheduling and budgeting for school events, workshops, and training sessions, with a focus on forecasting costs, setting spending limits, and identifying funding sources to support activities that enrich students' learning experiences and personal growth. Facility maintenance ensures that school infrastructure remains safe, clean, and functional. These recurring operational expenses, which can include everything from minor repairs to major facility upgrades, must be carefully budgeted and monitored to prevent overspending.

Orange keywords were secondary contexts for financial management, like leadership, management, directives, accounting, fundraising, and procedures. Strong financial management starts with capable leaders who set a vision and establish financial priorities. School leaders, such as principals and finance officers, must demonstrate fiscal responsibility by guiding their teams, advocating for budgetary needs, and making strategic decisions about resource allocation. For instance, leaders might implement periodic training for staff on budgetary compliance and sustainable spending practices. Management directives involve policies and protocols that direct financial operations, ensuring funds are used according to school goals and legal requirements. Clear directives might include guidelines on procurement, approval processes for expenditures, or maximum spending limits for various categories. For example, a school may have directives that outline approval hierarchies for expenses, requiring department heads to justify their requests with projected outcomes before higher-level approval. This helps maintain control over spending and ensures that funds are aligned with educational priorities.

10. Conclusion

This study explored the leadership techniques essential for strategic financial management in schools, anchored on theories such as Behavioral Leadership Theory, Theory of Change, Systems Theory, Resource Dependency Theory, and Efficiency Theory. The findings highlight the critical role school heads play as financial managers within the decentralization of the educational system. School leaders are expected to manage resources, make budgeting decisions, and ensure transparency while collaborating with multiple stakeholders. The theories suggest that effective leadership can be cultivated, with school heads needing to enhance their skills to manage financial challenges. Systems Theory underlines the nature of school operations, while ToC emphasizes strategic planning and stakeholder involvement to achieve desired financial outcomes.

In practicality, for schools to achieve financial sustainability and operational efficiency, school heads needed to adopt a comprehensive and flexible approach to financial management. Training programs that focused on capacity building for school leaders in financial literacy and strategic decision-making were necessary. Furthermore, having a culture of collaboration with stakeholders, such as PTAs and alumni, enhanced the collective financial oversight and contributed to better resource allocation. By integrating the principles of transparency, prioritization, and teamwork, school heads created an environment where financial resources were managed effectively to support educational goals and improve student outcomes. The theoretical framework also pointed to the need for ongoing adaptation, as unforeseen circumstances could arise, requiring school leaders to be proactive in reallocating resources to maintain the school's financial health.

Conflict of interest

The authors declare no conflict of interest.

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