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(IJEPC)**www.ijepr.com**TOWARD A THEORY-DRIVEN FRAMEWORK FOR
RESEARCH CULTURE IN SECONDARY SCHOOLS: A
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This work is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)**Abstract:**

This conceptual study explores the critical factors influencing the development of a research culture in Malaysian secondary schools. While the importance of research in promoting educational quality and teacher professional development is widely acknowledged, research engagement at the school level remains low. Drawing from the existing body of literature, this paper identifies five key constructs that shape research culture which is leadership, financial support, research facilities, academic workload, and reward systems. Based on an extensive literature review, the study proposes a conceptual framework that links leadership and resources to the establishment of a research culture. The framework offers a holistic perspective for understanding the interplay between organizational factors and teacher motivation in school-based research. This paper contributes to scholarly discourse by consolidating current knowledge on the topic and providing a theoretical foundation for future empirical investigation. The insights generated are intended to support education policymakers and school administrators in creating supportive environments that promote sustained research activity among educators.

Keywords:

Research Culture, Leadership, Secondary Education, Teacher Workload, Educational Administration

Introduction

The incorporation of research culture into educational institution ecosystems are becoming increasingly important for reforming education and helping teachers grow professionally. A research-informed school environment encourages critical thinking, reflective practice, and data-driven decision-making, all of which contribute to improved teaching and learning outcomes (Challinger, 2005; Roscoe et al., 2019). When teachers are involved in research, they are more likely to use new teaching methods, assess their teaching methods, and make a real difference in how schools get better initiatives.

In Malaysia, it is important to integrate research into educational institutions. The Malaysia Education Blueprint 2013–2025, clearly lays out the role of institutions, which calls for practices based on evidence, ongoing professional development, and the cultivation of Higher-Order Thinking Skills (Ministry of Education Malaysia, 2013). However, despite these policy aspirations, research engagement among secondary school teachers remains relatively low (Norazman et al., 2019). In practice, many teachers think research is seen as secondary to their professional duties, frequently because of institutional limitations and insufficient assistance.

A growing body of literature suggests that several interrelated factors influence the development of a research culture in schools. These include the quality of school leadership (Thannimalai & Raman, 2018), availability of financial and physical resources (Alam & Khalid, 2020), teacher workload (Nordin et al., 2020), and the presence or absence of incentives (Nazir et al., 2025). While each of these elements has been individually explored, there is a lack of holistic models that combine these dimensions into an integrated conceptual framework tailored to the secondary school context.

Despite progressive national education policies that emphasize the integration of research and innovation in teaching practice, the actual implementation of research culture in Malaysian secondary schools remains limited and fragmented. Although the Malaysia Education Blueprint 2013–2025 advocates for evidence-based practice, continuous teacher development, and school-based innovation, many secondary school educators still perceive research as peripheral rather than integral to their professional roles (Ministry of Education Malaysia, 2013; Norazman et al., 2019). This disconnect is further exacerbated by a range of institutional and systemic challenges that restrict the ability of schools to nurture a culture of inquiry.

Multiple studies have identified key constraints that impede the cultivation of research culture at the school level. These include a lack of visionary and supportive leadership (Thannimalai & Raman, 2018), inadequate financial resources and facilities (Alam & Khalid, 2020), heavy teaching workloads (Nordin et al., 2017; Hashim & Hussin, 2021), and the absence of structured reward systems that recognize or incentivize research contributions (Kamarudin et al., 2021; Latip & Abas, 2022). While these issues have been examined individually in prior research, there is no unified model that integrates these variables into a comprehensive framework applicable to the Malaysian secondary school context. As a result, efforts to promote research engagement among teachers are often ad hoc, policy-driven rather than school-led, and lack strategic sustainability.

Furthermore, much of the existing literature tends to focus on research practices in higher education, leaving a gap in understanding how school-based research functions within the unique operational, administrative, and cultural environments of secondary schools. Without a

clear conceptual foundation, school leaders and policymakers face significant limitations in designing effective interventions, allocating resources, or embedding research into school improvement plans.

Given these limitations, there is a critical need to develop an integrated conceptual framework that systematically identifies and explains the key organizational and motivational factors influencing research culture in Malaysian secondary schools. Such a framework would serve not only as a basis for future empirical inquiry but also as a strategic tool for school leaders, administrators, and education stakeholders aiming to institutionalize research as a core dimension of school development.

Literature Review

The development of a research culture in schools has garnered increasing attention in contemporary educational discourse. A well-established research culture serves not only to enhance the quality of teaching and learning but also to support institutional innovation, reflective practices, and policy implementation. Although the concept has been widely explored in higher education, its application in primary and secondary school contexts, especially within developing countries such as Malaysia, remains under-researched and inadequately implemented. This section reviews the existing literature on the core elements that influence research culture in schools, with a particular focus on five interrelated factors: leadership, financial support, research facilities, teacher workload, and reward mechanisms.

Leadership and Research Culture

School leadership is consistently identified in the literature as a critical catalyst for cultivating a research-engaged professional environment. Effective leaders influence not only the operational and instructional dimensions of schools but also shape the cultural norms and institutional priorities that support or suppress research activity (Bush, 2008; Hallinger, 2005). Leadership that is visionary, supportive, and inclusive fosters a climate in which inquiry, critical reflection, and innovation are embedded in school practices.

In the Malaysian context, however, leadership styles in secondary schools are often characterized by hierarchical structures and managerial orientations that prioritize compliance over creativity (Ghazali et al., 2025; Rahim et al., 2023). This administrative focus frequently sidelines research in favor of performance metrics such as examination results or bureaucratic efficiency. Consequently, teachers may not receive the institutional encouragement, mentorship, or strategic guidance necessary to initiate or sustain research-based practices. Without purposeful leadership that values and models research engagement, the prospects of establishing a research-oriented school culture remain limited.

Financial Support

Adequate financial support serves as a foundational enabler for the operationalization of school-based research. Funding facilitates access to resources such as professional development workshops, research tools, academic literature, and dissemination opportunities, including publication and conference participation (Moneva et al., 2020). Conversely, insufficient or absent financial allocation can pose a significant constraint on teachers' ability to conduct meaningful and methodologically sound research.

Empirical studies in Malaysia reveal that many secondary schools operate under restrictive budgets, with minimal provision for research-oriented expenditures (Azman et al., 2025; Yunus et al., 2022). Even where funds exist, bureaucratic delays and limited transparency in allocation often discourage teachers from applying for or accessing these resources. Without dedicated funding mechanisms, teachers may either forgo research or resort to self-funding, both of which undermine equity and sustainability in research participation.

Research Facilities

Beyond financial considerations, the availability of appropriate research facilities plays a pivotal role in supporting a research-conducive environment. Such facilities include access to academic databases, digital tools, high-speed internet, library resources, and physical spaces for collaboration. The literature underscores that infrastructural readiness is a prerequisite for fostering an institutional culture where research is feasible, accessible, and normalized (Ali et al., 2024; Norazman et al., 2019).

In the Malaysian secondary education landscape, disparities in facility provision between urban and rural schools are stark. Teachers in rural or under-resourced schools often lack access to even basic digital infrastructure, thereby severely limiting their ability to engage with scholarly literature or utilize analytical software (Roslan et al., 2023). This inequity not only creates practical barriers but also conveys implicit messages about the value, or lack of research in certain contexts. Addressing infrastructural deficits is thus essential for democratizing access to research opportunities across diverse educational settings.

Academic Workload

The intensity of teachers' workloads has been extensively cited as one of the most persistent and demotivating barriers to research engagement. Teaching responsibilities, coupled with administrative tasks, extracurricular duties, and non-instructional obligations, frequently leave educators with little discretionary time or cognitive bandwidth for scholarly inquiry (OECD, 2020; Nordin et al., 2017). In such environments, research becomes an additional task rather than a core component of professional identity.

Malaysian secondary school teachers are particularly affected by this challenge, as their schedules are densely packed and rarely allow for time dedicated to research (Hussin et al., 2022). Even when teachers possess the interest and capability to conduct research, the institutional structure often fails to provide protected time or workload reductions to accommodate such efforts (Yang et al., 2021). Without systemic reforms that recognize and integrate research within professional duties, research activities are likely to remain marginal and unsustainable.

Rewards

Reward constitutes a powerful motivational lever for encouraging teachers to engage in research. Recognition, whether through promotions, financial incentives, awards, or public acknowledgment, signals that research is a valued and integral part of professional practice (Yang et al., 2021). Moreover, the presence of clear reward pathways enhances the legitimacy and appeal of research, especially in contexts where teachers are required to balance multiple competing responsibilities.

However, in many Malaysian schools, formal systems of reward for research engagement are either underdeveloped or inconsistently applied (Kamaruddin et al., 2023). Promotion schemes and appraisal systems rarely take research output into serious consideration, thereby disincentivizing scholarly activity. The absence of institutional recognition not only undermines motivation but also risks framing research as a superfluous endeavor rather than a strategic priority. Establishing structured, transparent, and equitable reward systems is essential for normalizing research as a core professional responsibility.

The reviewed literature converges on the understanding that research culture in schools is shaped by the synergistic interaction of structural, institutional, and motivational factors. Leadership sets the tone for engagement; financial and material resources make research possible; manageable workloads make it feasible; and rewards make it worthwhile. These factors must be addressed collectively through coordinated policies and school-level strategies. Piecemeal interventions are unlikely to yield sustainable results. For Malaysian secondary schools to become centers of professional inquiry and innovation, a comprehensive and systemic approach to research culture development is required.

Theoretical Underpinning

In alignment with Creswell & Creswell (2023) suggestion, this investigation incorporated a specialised division in the research proposal to explicate the foundational principles. Creswell & Creswell (2023) argued that having a separate section explaining the theoretical reasoning makes it easier to understand the theory, how it works in real life, and how it relates to the subject. Readers, therefore, possess the ability to effortlessly discern the theory from its other constituent components.

A theory can be defined as a conceptual framework that offers an elucidation of a specific social phenomenon through the identification and depiction of a compilation of causally significant elements (Neuman, 2014). The aforementioned elements, which may encompass characteristics, traits, or attributes, are denoted as variables (Cooper & Schindler, 2014). As a final remark, a theory can be understood as a rational framework that establishes a connection between two or more variables through a collection of overarching propositions (Abend, 2008; Zikmund et al., 2013).

a) Resource Based View Theory (RBV)

This research employs the resource-based theory (RBT), also referred to as the resource-based view (RBV) theory, to scrutinise the correlation existing between pivotal resources and the fostering of a research culture within schools. The Resource-Based View (RBV) is a theoretical framework that conceptualises organisations as assemblies of resources (see Figure 2.1) (Amit et al., 1993; Barney, 1991). The Resource-Based View (RBV) contends that sustainable competitive advantage and superior performance begin with the inside resources of the organisation rather than from outside market factors like market structure and firm positioning within the market (El Nemar et al., 2022; Foss, 2011). The central tenet of the RBV is that organisations with valuable, rare, imperfectly imitable, and non-substitutable resources generate a competitive advantage over rivals, and this advantage leads to above industry-average performance for the firm (Barney, 1991; J. J. M. Ferreira et al., 2022).

Table 1 RBV Dimensions and its Relation to Conceptual Framework

No.	RBV Dimensions	Relation to DV / IV / Mediator
1.	Competitive advantages	Research culture - The concept of research culture as a competitive advantage pertains to the tactical advantages achieved by an organisation through the fostering of an atmosphere conducive to the encouragement and advancement of high-quality research.
2.	Valuable	Leadership: Proficient leadership offers guidance, assistance, and encouragement, all of which play a pivotal role in cultivating a conducive research atmosphere. Financial Support: Sufficient financial support is imperative for the facilitation of top-notch research, procurement of essential tools, and recruitment of proficient researchers. Research Facilities: Availability of advanced laboratories, databases, and other research facilities aids in the implementation of innovative research projects.
3.	Rare	Academic workloads: Effective management of academic workloads within schools, ensuring adequate time for research endeavours, is a rare phenomenon that holds the potential to greatly bolster research productivity. Rewards: the establishment of a structured framework for rewarding and acknowledging research accomplishments is not commonly found and has the capacity to stimulate increased levels of performance and creativity.
4.	Inimitable	Leadership: The distinctive leadership methodologies and the organizational culture they foster within a given institution pose challenges for replication by other institutions. Research Facilities: The amalgamation and incorporation of research assets, coupled with the proficiency in leveraging them efficiently, may prove to be inimitable.
5.	Organisation	Leadership: Well-structured schools could effectively harness their valuable, rare, and inimitable resources. This involves maximizing the utilisation of research facilities, financial support, and workforce to enhance the performance and calibre of teachers. Adequate organization guarantees that resources are distributed to where they are most essential and can yield the greatest impact, minimizing inefficiency and boosting efficiency.

No.	RBV Dimensions	Relation to DV / IV / Mediator
		Financial Support: Although financial support is essential, the precise distribution and strategic utilisation of resources for research cannot be replaced by alternative means.

Sources: Authors

b) Transformational leadership

Transformational leadership within educational environments was first introduced in Canada by Leithwood & Jantzi (1999) and his associates during the latter part of the 1980s and the early 1990s (Geijsel et al., 2003). A model of transformational leadership in schools was also formulated because of this study, displaying certain parallels as well as distinctions from the Bass model. The Leithwood & Jantzi (2006) model encompasses three overarching categories of leadership practices which includes 1. setting directions (vision); (2) developing people (intellectual stimulation); and (3) redesigning the organization (individualised consideration). This research results could potentially substantiate the established correlation among transformational leadership, teacher commitment, and the implementation of innovative practices (Kılınç et al., 2022; Thoonen et al., 2011; J. Zhang et al., 2022).

Table 2 provides a concise overview of how attributes of transformational leadership could potentially facilitate the establishment and advancement of a research culture within schools.

**Table Error! No text of specified style in document. Transformational Leadership
Dimension in Research Culture**

No.	Research Culture Dimensions	Transformational Leadership Dimensions
1.	School encourages teachers to engage in research activities.	Transformational leaders elucidate an inspiring vision that encourages and propels followers towards the attainment of ambitious objective (S. Grobler & Grobler, 2023). The encouragement of teachers to partake in research endeavours is in harmony with the process of vision establishment, as it signifies a dedication to nurturing a climate of exploration, novelty, and ongoing enhancement within the school. Through the advocacy of research initiatives, leaders manifest their vision of progressing knowledge and enriching pedagogical methodologies.
2.	School organizes training programs or workshops to develop research skills.	Developing people (intellectual stimulation) encompasses the act of questioning assumptions, cultivating innovation, and facilitating ongoing education (Ahmad et al., 2020; Heinzová & Bindová, 2022). The arrangement of educational workshops or seminars aimed at enhancing research competencies affords teachers avenues for intellectual growth and professional development. Through the promotion of expanding research

No.	Research Culture Dimensions	Transformational Leadership Dimensions
3.	School encourages teachers to publish their research work in journals or magazines.	proficiencies among teachers, leaders foster intellectual inquisitiveness and enable academic staff to delve into novel concepts and methodologies within their pedagogical endeavors. Redesigning an organisation (individualised consideration) involves modifying structures, systems, and procedures to foster innovation and quality (Ertem & Aypay, 2021; Reinius et al., 2022). Encouraging teachers to publish their scholarly articles in professional publications necessitates reimagining the academic culture within the institution. Individuals in leadership roles who endorse avenues for publishing support the sharing of knowledge and enhance the prestige of the school as a hub of research excellence (Burn et al., 2021). Through altering scholarly standards and anticipated outcomes, leaders play a role in continuously enhancing the organisation's research environment.
4.	Teachers are encouraged to present their research findings to the school community.	Similar to promoting research endeavours, aiding teachers in sharing their research results with the educational institution's community enhances the objective of cultivating an environment of curiosity and knowledge dissemination (M. F. Hill & Haigh, 2012). Through offering avenues for teachers to exhibit their research work, leaders convey the significance of openness, collaboration, and collective learning. Presenting research findings via presentations serves to unite the school community towards shared objectives and ambitions.
5.	Teachers are given opportunities to collaborate with colleagues on research projects	Collaboration plays a pivotal role in the restructuring of organisations by encompassing the dismantling of silos, encouragement of teamwork, and utilisation of combined expertise (Stewart, 2006). Providing teachers with chances to engage in joint research initiatives nurtures a feeling of community and united goals. Transformational leaders establish mechanisms and protocols that facilitate interdisciplinary cooperation, the exchange of information, and collective assistance among team members. Through the promotion of collaborative research ventures, leaders bolster the organisation's capability for creativity and problem-solving.

Sources: Authors

In essence, every component of the research culture corresponds with particular elements of Zhang et al. (2022) that adapted Leithwood & Jantzi (2006) model of transformational leadership, emphasising the significance of building a vision, encouraging intellectual stimulation, and redesigning the structure of the organisation to promote a dynamic research culture in schools.

Proposed Conceptual Framework

The development of a research culture in educational institutions is shaped by a complex interplay of organizational and motivational factors. Drawing upon a synthesis of the literature, this paper proposes a conceptual framework that identifies five critical dimensions that influence the establishment and sustainability of research culture in Malaysian secondary schools: (1) Leadership, (2) Financial Support, (3) Research Facilities, (4) Academic Workload, and (5) Rewards. These dimensions are not mutually exclusive; rather, they function interactively to either enable or constrain teacher engagement in research-based practices.

Leadership plays a pivotal role in setting the vision, establishing priorities, and fostering an institutional climate that values research. Effective school leaders promote teacher autonomy, allocate time and resources for professional inquiry, and model evidence-based decision-making. As noted in existing research, a lack of strategic and research-oriented leadership often results in minimal teacher engagement in research activities (Latiff et al., 2022; Thannimalai & Raman, 2018).

Adequate financial support is a necessary condition for initiating and sustaining research efforts in schools. Funding enables teachers to access training, purchase research tools, attend academic conferences, and publish findings. Without dedicated budget allocations or financial incentives, research activities are often deprioritized due to resource scarcity (Azman et al., 2025; Yunus et al., 2022).

Physical and technological infrastructure, such as internet access, libraries, research software, and access to academic databases, serves as an important enabler of research. Schools with adequate facilities are more likely to foster a research-conducive environment, while under-resourced schools face significant structural barriers to participation (Ali et al., 2024; Roslan et al., 2023).

The extent to which teachers can engage in research is also determined by their workload. High teaching loads, administrative tasks, and co-curricular obligations significantly reduce the time and cognitive capacity required for scholarly inquiry. Research engagement is more feasible in environments where teaching schedules allow for dedicated research time or reduced workloads for active researchers (Hussin et al., 2022).

Motivational factors, particularly those tied to recognition and career progression, play an essential role in encouraging teacher participation in research. Schools that embed research outcomes into promotion criteria, performance appraisals, and institutional recognition systems are more likely to sustain research culture over time (Kamaruddin et al., 2023; Latiff et al., 2022). Conversely, the absence of formal rewards often leads to low participation despite policy directives.

Below is the proposed conceptual work:

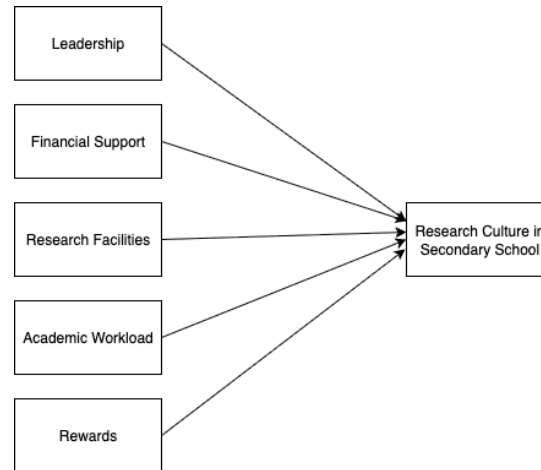


Figure 1: Conceptual Framework

Sources: Authors

This framework provides a holistic perspective on the structural and motivational elements required to institutionalize research culture in Malaysian secondary schools. By identifying these components, the model offers a strategic guide for school administrators, education planners, and policymakers to design targeted interventions. It also sets the groundwork for future empirical research aimed at validating the framework and assessing the relative impact of each dimension across diverse school contexts.

Conclusion

This conceptual paper sought to explore and consolidate key factors influencing the development of a research culture in Malaysian secondary schools. Despite national educational reforms emphasizing evidence-based practice and continuous professional development, research engagement among teachers remains constrained by multiple systemic and institutional barriers. A critical review of the literature revealed five interrelated dimensions that significantly impact the cultivation of research culture: leadership, financial support, research facilities, academic workload, and reward mechanisms.

In response to the fragmented nature of previous studies, this paper proposes a comprehensive conceptual framework that synthesizes these dimensions into a coherent model. Leadership emerges as the initiating force that shapes institutional priorities, while financial resources and infrastructural support provide the means through which research can be operationalized. Academic workload, if not properly managed, serves as a deterrent, whereas structured reward systems function as key motivational drivers. When these elements function synergistically, they create an enabling environment where research is not only feasible but also sustainable.

The proposed framework contributes to the scholarly discourse by offering a theoretically grounded foundation for future empirical research. It also provides a strategic reference for policymakers, education planners, and school administrators aiming to institutionalize research

as a core element of professional practice in schools. Moving forward, validating this framework through empirical studies will be essential to determine its applicability across diverse school contexts and to inform targeted policy interventions. Ultimately, fostering a strong research culture in secondary schools is not only a policy aspiration but a necessary step toward building a resilient, reflective, and research-informed education system in Malaysia.

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