Volume: 11 Issues: 69 Special Issue [October, 2026] pp. 588-601
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116944

# BEYOND SMARTPHONE BANS: AN INSTITUTIONAL GOVERNANCE FRAMEWORK FOR. MANAGING ACADEMIC CYBERLOAFING AND LEARNING ATTENTION IN PRE-UNIVERSITY EDUCATION

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**Article history**
**Received date** : 17-9-2026
**Revised date** : 18-9-2026
**Accepted date** : 27-10-2026
**Published date** : 29-10-2026

**To cite this document:**
Mansor, S., Jusoh, M. A., & Baker, R. (2026). Beyond smartphone bans: An institutional governance framework for managing academic cyberloafing and learning attention in pre-university education. *International Journal of Accounting, Finance and Business (IJAFB),* 11 (69), 588-601.

**Abstract:** *Smartphone restrictions are often discussed as binary policy choices, yet organisations must also ensure that rules are understood, consistently enacted and coordinated with daily work. For pre-university institutions, privately owned smartphones create a governance problem because the same device supports legitimate learning and task-incongruent online activity. This conceptual paper develops an institutional-governance framework that distinguishes perceived smartphone rule implementation, classroom management practices and student self-control as three complementary conditions associated with academic cyberloafing and learning attention. Using a purposive critical synthesis of smartphone-policy, digital-distraction and organisational-implementation research, the paper combines Socio-Technical Systems Theory and Social Cognitive Theory as complementary interpretive lenses. The proposed five-construct model retains seven direct and three indirect statistical propositions. Its principal contribution is to translate a general 'technology-personal-environment' classification into a management-oriented account of formal rule enactment, frontline classroom practice and individual behavioural regulation. An illustrative governance matrix identifies responsibilities and potential indicators for school leaders, teachers and learners; these are proposed monitoring considerations rather than tested interventions. Because the model has not been empirically validated, the associations do not establish causal effects or temporal mediation. The framework offers a bounded agenda for investigating policy implementation, managerial coordination and learning attention among Malaysian Form Six learners and comparable school-governed pre-university populations.*

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International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
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**Keywords:** *institutional governance; smartphone rule implementation; classroom management; academic cyberloafing; self-control; learning attention; pre-university education*

## Introduction

Education institutions face an organisational challenge when personal digital devices enter teaching environments. Smartphones can support information access, teacher-directed tasks and communication, but also enable non-academic browsing and messaging during instruction. The issue is consequently not simply whether a device is useful or distracting; it is how an institution organises rules and frontline practices while allowing legitimate educational work. This governance perspective makes smartphone management relevant to organisational coordination, behavioural compliance and the delivery of educational services.

A policy announcement and a policy-in-use are not necessarily identical. International studies show heterogeneity in the rationales, design and enactment of smartphone restrictions, while reviews report mixed results across educational and wellbeing outcomes (Böttger & Zierer, 2024; Campbell et al., 2024; Randhawa et al., 2025). In a cross-sectional study, Goodyear et al. (2025) found lower in-school phone and social-media use in more restrictive schools without corresponding differences in overall use or mental wellbeing. These findings do not demonstrate that implementation quality causes learning improvement; they suggest that policy severity alone is an incomplete basis for management decisions.

The management problem is sharpened by a difference between formal organisational control and operational routines. Digital-distraction research already recognises technology, personal and environmental factors (Martin et al., 2025), and school-based accounts illustrate the importance of classroom cues and teacher practices (Cardwell, 2024; Delaney, 2022). However, broad classifications do not necessarily distinguish the institutional process of communicating and enforcing a rule from the frontline process of structuring instructional work. Treating both as a single 'environmental' factor may limit managerial diagnosis: a school cannot know whether it should revise a rule, improve implementation consistency or strengthen everyday lesson organisation.

Implementation research reinforces the distinction between adoption and delivery. Findings across public-service programmes indicate that implementation conditions matter for observed outcomes, although effect estimates from other fields cannot be transferred directly to smartphone governance (Durlak & DuPre, 2008). Educational organisations may also be loosely coupled: formal decisions taken by administrators do not necessarily translate uniformly into individual classrooms (Weick, 1976). An implementation-centred model is therefore useful precisely when policy rules coexist with professional discretion and learner autonomy.

This paper specifies a five-construct associative framework linking perceived smartphone rule implementation (SRI), classroom management practices (CMP), student self-control (SC), academic cyberloafing (AC) and learning attention (LA). The purpose is threefold: to define organisational and individual conditions without construct overlap; to state ten propositions suitable for later empirical scrutiny; and to identify responsible management processes without

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asserting that any intervention has already been shown effective. Malaysian Form Six provides the intended boundary context—a relatively autonomous pre-university population still subject to school governance.

**Conceptual Approach and Scope**

This article develops theory-based propositions through a purposive critical synthesis rather than a systematic literature review. The starting material was the research base assembled for the doctoral study's Chapters 1–3; this was reconsidered alongside selected publications on implementation, organisational coordination and school smartphone policy relevant to the IJAFB management audience. Selection privileged theory-bearing sources, evidence directly relevant to school policy or cyberloafing, and studies that clarify conflicting findings. The process does not claim exhaustive coverage, formal search screening, quality scoring or meta-analytic estimation.

The analytic sequence was: (a) distinguish policy adoption, implementation and routine operational practice; (b) compare the explanatory scope of policy, classroom and digital-distraction literature; (c) establish discriminant boundaries for five constructs; (d) use Socio-Technical Systems Theory (STS) and Social Cognitive Theory (SCT) to specify plausible relationships; and (e) derive ten contestable propositions and corresponding managerial questions. This approach follows the function of conceptual integration rather than a quantitative estimate of effectiveness. Each inference below is presented as an argument to be tested, not a finding from the doctoral population.

The focal setting is Malaysian Form Six education, where older learners exercise substantial personal digital choice within a school-governed institutional structure. International secondary and tertiary studies provide transferable questions, not automatic evidence for Malaysia. The principal empirical unit in the proposed survey is the student; a student rating of implementation is a perception of governance and should not be labelled the objective performance or fidelity of an entire institution.

From Smartphone Policy to Institutional Governance: The Unresolved Management Problem

The governance challenge has three analytically distinct parts. First, a school makes a formal decision about permissible device use, exceptions and responses to breaches. Second, teachers interpret and enact the decision during lessons while simultaneously managing learning tasks, time and disruptions. Third, learners decide whether to redirect their attention toward an accessible non-academic activity. Studies of school policies clarify institutional design and enactment (Randhawa et al., 2025; Wikström et al., 2024); digital-distraction scholarship shows that multiple environmental and personal factors are relevant (Martin et al., 2025). Neither stream, on its own, establishes the proposed full relationship between perceived rule enactment, ordinary classroom practice, self-control, academic cyberloafing and learning attention in Form Six.

For managers, this is a coordination problem rather than a justification for stricter punishment. A written policy may be extensive but poorly communicated; teachers may run engaging lessons under uneven school rules; students may remain focused despite comparable external conditions because of different self-control resources. These scenarios imply distinct responsibilities and diagnostic indicators. The framework makes the narrower contribution of

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separating perceived rule enactment from general classroom management and relating both to a task-specific digital behaviour and proximal learning outcome, while retaining the possible direct association of each antecedent with attention.

**Table 1: Scholarly foundations and unresolved managerial questions**

| Research stream | Established contribution | Governance question retained by this paper |
|---|---|---|
| School bans and restriction evidence (Campbell et al., 2024; Goodyear et al., 2025) | Effects depend on outcomes, definitions and school contexts; policy strictness is not a complete management metric. | What do learners experience concerning clarity, communication and consistent enactment? |
| Policy enactment (Randhawa et al., 2025; Wikström et al., 2024) | Formal policies are designed, interpreted and enacted through institutional processes. | Can learner-perceived rule implementation be distinguished from written policy status? |
| Organisational implementation (Weick, 1976; Durlak & DuPre, 2008; Nilsen, 2015) | Formal organisational decisions and local implementation may diverge. | Which school-level and frontline practices should be tracked separately? |
| Digital distraction and cyberloafing (Alyahya & Alqahtani, 2022; Martin et al., 2025) | Technology, personal and environmental conditions contribute to task distraction. | Can specific cyberloafing be distinguished from attention, screen time and general engagement? |
| Classroom and individual processes (Toker & Baturay, 2021; He et al., 2026) | Teacher-related factors and student self-control are relevant to cyberloafing in studied populations. | How do formal rule enactment, everyday classroom routines and individual control align? |

Source: Authors' interpretive synthesis of the cited literature; no primary empirical estimates are reported.

## Theoretical Foundations: Organisational Alignment and Behavioural Regulation

### Socio-Technical Systems Theory and the Managerial Alignment Problem

Socio-Technical Systems Theory (STS) holds that the consequences of technology use depend on how social roles, work tasks, processes and technical arrangements are configured, rather than on the mere presence of a device (Di Maio, 2014). In a school, a smartphone simultaneously belongs to a learner's personal digital environment and an institution's managed instructional environment. The organisational task is therefore to align formal usage conditions with the actual requirements of teaching, communication and learning. Restriction severity is only one aspect of that alignment.

SRI represents the learner-perceived enactment of formal governance: understandable rules, communication, consistency and feasible monitoring. CMP represents frontline operational practice: lesson routines, clear tasks, pacing, monitoring engagement and managing disruption. These dimensions interact but are not conceptually interchangeable. A strict rule cannot compensate automatically for unclear learning tasks, and effective routines do not guarantee that institution-wide rules are interpreted consistently. STS supports examining these

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dimensions together while making no claim that their statistical coefficients must be positive, negative or causal.

**Social Cognitive Theory and the Learner as an Active Organisational Participant**

Social Cognitive Theory (SCT) provides a complementary account of reciprocal relations among environment, individual capabilities and behaviour (Bandura, 1988). Students are not passive recipients of school rules: they interpret expectations, regulate impulses and make choices while encountering social and digital cues. Self-regulation theory emphasises monitoring and goal-directed learning processes (Zimmerman, 1989). In this model, SC denotes a relatively general capacity, whereas AC denotes a specific off-task online behaviour arising within a task context. Treating them separately prevents a tautology in which low self-control is measured simply as frequent cyberloafing.

STS explains the coordination of governance structures and educational work; SCT explains why individual behavioural responses can differ under otherwise similar conditions. Neither theory alone proves that cyberloafing temporally mediates learning attention. Together they generate a testable management proposition: the value of formal control must be evaluated alongside frontline processes and learner agency. The framework does not merge STS and SCT into a new theory, and its arrows identify specified statistical associations rather than verified causes.

**Policy Implementation, Frontline Discretion and Accountability**

Implementation theory distinguishes the existence of a policy from the determinants and processes through which it becomes routine practice (Nilsen, 2015). Organisational research on loosely coupled schools provides a rationale for examining possible gaps between central decisions and classroom enactment (Weick, 1976). Reviews of implementation across public-service interventions further caution that programme design alone is insufficient to infer outcomes (Durlak & DuPre, 2008). These sources do not establish effects in Form Six; they sharpen the management question: who communicates rules, who interprets exceptions, how is implementation monitored, and what evidence would distinguish substantive enactment from symbolic compliance?

The proposed account separates managerial responsibility from statistical measurement. Leadership can own rule formulation and communication, teachers can organise learning tasks and enforce legitimate boundaries, and students can exercise self-control. Yet the planned survey measures student perceptions of SRI and CMP, not an independent audit of leaders' actions. An observed association at the student level must therefore not be recast as demonstrated institution-level effectiveness or accountability.

**Construct Definitions and Measurement Boundaries**

An IJAFB-oriented governance account must define precisely what managers can diagnose. School policy strictness, implementation experience, everyday classroom management and learner behaviour are different measurement objects. The five constructs therefore remain as in the doctoral model (Table 2), with attention to discriminant validity. The policy document, digital access, total screen time, school finances and examination results are relevant possible contextual variables, but they are not inserted post hoc as new latent constructs or unobserved outcomes.

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**Table 2: Construct definitions, responsibilities and discriminant boundaries**

| Construct | Conceptual domain | Boundary / interpretation safeguard |
|---|---|---|
| SRI | Perceived clarity, communication, consistency and monitoring/enforcement of smartphone rules. | Learner-rated experience, not policy strictness or externally validated institutional fidelity. |
| CMP | Routine classroom organisation, task clarity, pacing, monitoring participation and disruption handling. | General frontline pedagogy, not a duplicate of phone-rule enforcement. |
| SC | General ability to regulate impulses and sustain goal-directed conduct. | Not an inverse score of AC or a claim about moral worth. |
| AC | Online activity unrelated to the prevailing learning task while that task requires attention. | Not all screen time, problematic use, addiction or authorised learning. |
| LA | Capacity to direct, sustain and return attention to present learning activities. | Not grades, overall satisfaction, global engagement or absence of smartphone use. |

Source: Authors' conceptual adaptation of Akbulut et al. (2016), Bandura (1988), Martin et al. (2025) and Zimmerman (1989).

### The Difference between Cyberloafing and Learning Attention

AC is defined relative to the educational task: unrelated social-media checking during a lesson is relevant, while teacher-assigned online research is not. The educational cyberloafing measure developed by Akbulut et al. (2016) and a subsequent school-focused validation (Sivrikova et al., 2019) offer points of departure, not ready-made proof of validity among Malaysian Form Six students. Educational studies vary in their definitions and measures (Alyahya & Alqahtani, 2022). Managers should therefore avoid interpreting total device use as a direct proxy for misconduct, compliance or ineffective instruction.

LA concerns the capacity to maintain and recover focus, whether digital tools are present or absent. Digital multitasking during homework is relevant to distraction but is not identical to learning attention during instruction (Mrazek et al., 2021). Related work on cyberloafing and cognitive engagement likewise addresses a neighbouring but different outcome (Levkov & Kitanovikj, 2024). Without discriminant measurement, associations between AC and LA may be inflated by overlapping questionnaire wording. A managerially meaningful model requires a behaviour measure and an attention measure that can, in principle, vary independently.

### Conceptual Framework and Testable Propositions

Figure 1 displays three proposed antecedents (SRI, CMP and SC), a task-specific behavioural construct (AC) and a proximal learning outcome (LA). Seven direct associations and three specific indirect statistical associations follow the doctoral design. No untested managerial factor has been inserted as an extra predictor. Formal governance, operational practice and personal self-regulation are retained as distinguishable loci of potential management action.
Theoretical reasoning suggests that clearer enactment, stronger classroom organisation and greater self-control could coincide with less off-task activity, while greater cyberloafing could accompany weaker attention. Yet countervailing processes are possible: severe enforcement

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may erode trust, educational technology access may be necessary for some tasks, and students experiencing low attention may turn to cyberloafing rather than the reverse. The formal propositions are therefore stated as associations, leaving effect direction and magnitude to evidence rather than presenting them as established management outcomes.

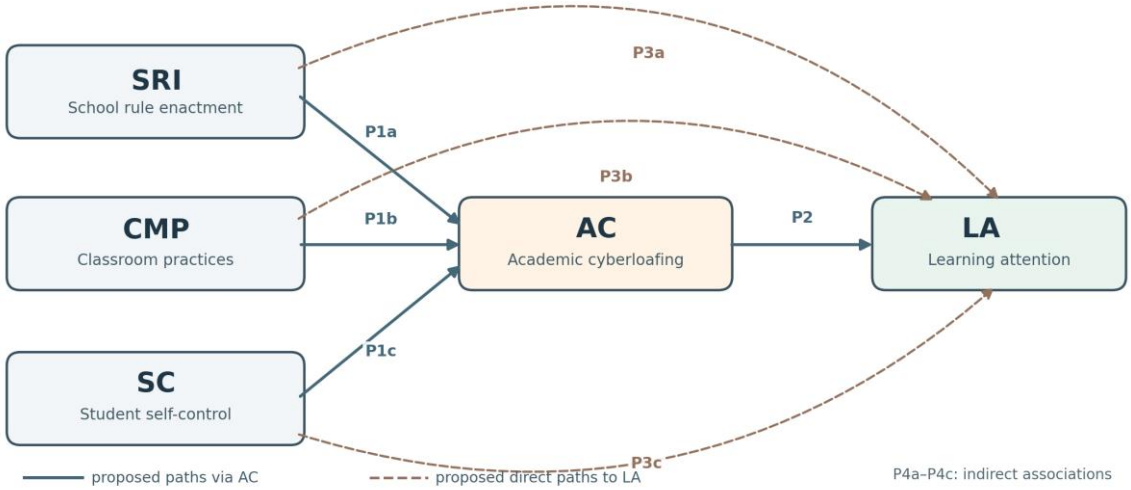



**Figure 1: An institutional governance and behavioural framework for digital attention**
Note: Solid arrows designate specified links involving academic cyberloafing; dashed arrows indicate direct associations with learning attention. P4a–P4c refer to proposed indirect statistical associations via AC. Arrows do not imply confirmed causal direction. Source: Authors' conceptual framework.

### Propositions on Rule Enactment and Frontline Classroom Management

Rule enactment is a management process concerned with whether expectations are understood and experienced consistently. Communication of authorised academic uses, exceptions and responses to breaches can potentially reduce uncertainty about task boundaries. Evidence on school policy design and stakeholder views makes this plausible (Gath et al., 2024; Randhawa et al., 2025). However, these studies do not directly estimate the SRI–AC association in the proposed population. The interest is in implementability and consistency, not the assumption that stronger sanctions necessarily produce better outcomes.

Frontline classroom management is a related but distinct operational process. A teacher controls task structure, transitions, pacing and monitoring during ordinary instruction; these conditions may influence the opportunities for unrelated phone use. Qualitative studies document classroom and environmental cues (Cardwell, 2024; Delaney, 2022), while studies in higher education have examined instructor-related predictors of cyberloafing (Toker & Baturay, 2021; Zhang et al., 2022). These findings help specify possible mechanisms but do not substitute for Form Six evidence. A school can have a sound policy but inconsistent classroom implementation, or clear lessons under an ambiguous policy.

P1a. Perceived smartphone rule implementation is associated with academic cyberloafing among pre-university students.

P1b. Perceived classroom management practices are associated with academic cyberloafing among pre-university students.

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**Proposition on Learner Self-Control**

Self-control is the learner's capacity to regulate an immediate digital impulse in favour of a current learning goal. A study of Chinese adolescents identifies self-control as relevant to cyberloafing in a larger model of smartphone use (He et al., 2026); experience-sampling evidence from university students also links self-control and academic cyberloafing (Zhou et al., 2021). Neither result supplies a causal or directly generalisable estimate for the intended Malaysian population. Within a governance framing, SC is not an alternative to institutional responsibility: it is a complementary personal condition whose development and support can be considered alongside the quality of rules and teaching.

P1c. Student self-control is associated with academic cyberloafing among pre-university students.

**Proposition on Digital Behaviour and Learning Attention**

Off-task messaging and browsing can be associated with interruptions, switching between competing tasks and delayed re-engagement. Evidence from teenage digital multitasking and higher-education cognitive engagement motivates examination of such associations (Levkov & Kitanovikj, 2024; Mrazek et al., 2021). However, difficulty concentrating may precede distraction-seeking, and both may reflect task design, motivation or peer context. Thus, the proposed behaviour–attention link is testable but not inherently causal; the managerial implication is to monitor both task-incongruent behaviour and attention rather than assuming one is a complete substitute for the other.

P2. Academic cyberloafing is associated with learning attention among pre-university students.

**Propositions on Direct Management and Personal Associations with Attention**

The model retains direct associations with LA because management practices may influence attention through channels other than observed cyberloafing. Clarity of rules may reduce uncertainty and conflict; effective lesson routines may structure attention even without smartphones; and self-control may support persistence despite non-digital distractions. These distinct processes are consistent with multidimensional distraction evidence (Martin et al., 2025) and classroom accounts (Delaney, 2022; Wikström et al., 2024). Their relative contributions require empirical estimation rather than managerial intuition.

P3a. Perceived smartphone rule implementation is associated with learning attention among pre-university students.

P3b. Classroom management practices are associated with learning attention among pre-university students.

P3c. Student self-control is associated with learning attention among pre-university students.
Propositions on Indirect Statistical Relationships

AC is positioned as an intermediary statistical construct because SRI, CMP and SC may each be associated with task-incongruent digital activity, which may itself be associated with LA. If a specified model yields a non-zero product of coefficients, that would demonstrate a model-dependent indirect statistical association, not a temporal or causal mechanism. Survey

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responses collected at one point cannot establish that a rule first changed behaviour and subsequently changed attention. Nor should the existence of any statistically significant pathway be interpreted as proof that an institution has achieved effective policy implementation.

P4a. Perceived smartphone rule implementation has a proposed indirect statistical association with learning attention through academic cyberloafing.

P4b. Classroom management practices have a proposed indirect statistical association with learning attention through academic cyberloafing.

P4c. Student self-control has a proposed indirect statistical association with learning attention through academic cyberloafing.

**Evidence Mapping and Limits of Management Inference**

Table 3 distinguishes empirical findings from conceptual extrapolation. It also clarifies where the paper adds operational management questions without asserting that existing studies have already tested the full model. Studies of ban severity do not directly assess perceived implementation quality; studies of classroom distraction do not invariably distinguish cyberloafing from legitimate phone use; and engagement measures need not represent sustained learning attention. The matrix is a purposive evidence map, not a formal systematic-review appraisal.

**Table 3: Evidence boundaries for ten proposed relationships**

| Path | Relevant prior evidence | What remains unverified |
|---|---|---|
| P1a: SRI–AC | Randhawa et al. (2025): secondary policy design/enactment; Gath et al. (2024): student and teacher policy views. | Neither directly tests the proposed SRI and AC pair in Malaysian Form Six. |
| P1b: CMP–AC | Cardwell (2024), Delaney (2022): qualitative classroom cues; Toker & Baturay (2021): tertiary teaching norms. | Evidence spans settings and does not isolate the proposed general CMP construct. |
| P1c: SC–AC | He et al. (2026): adolescent self-control/cyberloafing; Zhou et al. (2021): university experience sampling. | Populations, operational definitions and observation windows differ. |
| P2: AC–LA | Levkov & Kitanovikj (2024): tertiary cognitive engagement; Mrazek et al. (2021): homework distraction. | Cognitive engagement, homework distraction and LA are not interchangeable. |
| P3a: SRI–LA | Campbell et al. (2024); Goodyear et al. (2025): policy comparisons with mixed outcomes. | Policy stringency is not perceived enactment; target outcome differs. |
| P3b: CMP–LA | Delaney (2022); Martin et al. (2025): classroom conditions and distraction. | No directly matched Form Six CMP-to-LA effect established. |

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| | | |
|---|---|---|
| P3c: SC–LA | Bandura (1988); Zimmerman (1989): personal agency and learning regulation. | The theoretical mechanism is not an effect estimate for the specified attention measure. |
| P4a: SRI–AC–LA | Component literatures on policy and distraction. | The complete indirect statistical chain has not been demonstrated. |
| P4b: CMP–AC–LA | Classroom environment and cyberloafing studies. | The complete indirect statistical chain has not been demonstrated. |
| P4c: SC–AC–LA | Adolescent/tertiary self-control and cyberloafing research. | The complete indirect statistical chain has not been demonstrated. |

Source: Authors' non-systematic critical appraisal; no newly collected data are reported.

**Contributions to Organisational Governance and Education Management**

The central conceptual contribution is the distinction between a rule as adopted and a rule as experienced in everyday practice. This reframes smartphone management as an implementation problem familiar to public-service organisations: formal decision rights, communication, consistency, frontline translation and practical monitoring can diverge. Organisational implementation literature supports asking about these processes (Durlak & DuPre, 2008; Nilsen, 2015; Weick, 1976), while smartphone-policy literature documents variation in school decisions (Randhawa et al., 2025). The paper does not claim to invent implementation theory; it offers a bounded operationalisation of these ideas in a school digital-governance context.

A second contribution is to separate two organisational levers within the broad instructional 'environment': SRI as perceived formal rule enactment and CMP as everyday task organisation. This refinement moves beyond simply relabelling technology, personal and environment categories already synthesised by Martin et al. (2025). The management benefit is a more diagnostic question: if academic cyberloafing and attention differ across learner experiences, which category of process warrants further investigation—policy communication and consistency, or classroom task management? Neither association alone licenses attribution of fault or policy impact.

Third, the framework treats learner attention as a constrained instructional resource requiring coordination rather than as a business performance metric. Digital time and attention are relevant to the quality of educational service delivery, but the paper does not measure productivity, profitability or institutional financial outcomes. Keeping AC distinct from LA makes room for productive digital use and permits testing whether governance-related associations extend beyond simple reductions in reported phone checking.

Fourth, the Form Six boundary is analytically meaningful: older students have greater autonomy while remaining subject to school rules, unlike university students or younger pupils. This provides a setting in which formal governance and personal agency can plausibly coexist. The applicability of the model to other school systems, educational institutions or service organisations remains a possibility for future comparison, not an empirical conclusion established here.

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**Managerial Implications: Responsibilities, Monitoring and Resource Stewardship**

Institutional leaders can separate policy design from implementation evidence. A governance review could assess whether rules state when phones are authorised for learning, whether exceptions are understandable and communicated, whether staff responses are reasonably consistent, and whether routine monitoring is proportionate and administratively feasible. Where differences are found, the response might involve clearer communication or professional support rather than automatic escalation of sanctions. These are candidates for management review, not policies tested by this conceptual article.

Teachers manage the immediate workflow of instructional service delivery. Task clarity, lesson pacing, planned transitions, visible learning objectives and timely responses to interruptions could be evaluated alongside formal rule implementation. Student accounts indicate that pedagogical and social environments matter to perceived distraction (Cardwell, 2024; Delaney, 2022). It would nevertheless be premature to infer that any single classroom practice guarantees stronger attention, particularly when task demands, accessibility needs and class composition differ.

Learner-focused support may involve modelling authorised use, practising delay of non-urgent checking and recovering attention after interruptions. Supportive self-regulation is conceptually distinct from transferring all responsibility to students. Institutional procedures should also consider fairness, transparent exceptions, data privacy and feasibility; an expensive surveillance system may not be proportionate to the instructional goal. Table 4 translates the three loci into a preliminary responsibility-and-monitoring matrix that can guide future research or local dialogue without treating any indicator as a validated performance standard.

**Table 4: Proposed governance responsibilities and verification questions**

| Governance locus | Illustrative managerial practice or evidence | Interpretive safeguard |
|---|---|---|
| School leadership / formal rule enactment (SRI) | Published guidance on permitted learning uses; communication to teachers/students; exception protocols; consistency checks. | Written policy and leadership intentions are not equivalent to student-perceived enactment. |
| Teacher / frontline classroom operation (CMP) | Lesson task clarity; transitions; monitoring task participation; support for planned academic device use. | Do not collapse everyday classroom management into rule enforcement alone. |
| Learner / self-regulation (SC) | Goal setting; delay of unrelated checking; strategies for returning to a task after interruption. | Avoid blame-based conclusions; self-report does not prove programme effectiveness. |
| Cross-level learning quality (AC and LA) | Task-specific reports of non-academic online activity together with separate measures of sustained attention. | These are different constructs; association does not establish causation or policy impact. |

Source: Authors' proposed conceptual mapping; indicators are not validated measures.

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eISSN: 0128-1844
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### Research Agenda, Methodological Safeguards and Limitations

The planned doctoral research uses a student-level cross-sectional questionnaire and PLS-SEM to examine the measurement model, seven direct paths and three indirect products. Its purpose is to estimate associations, not to conduct an intervention or evaluate institutional finances. For management interpretation, discriminant validity is particularly important: SRI items must measure perceived communication and consistency rather than general lesson quality; CMP items must avoid rephrasing phone-rule enforcement; SC must not be the inverse of cyberloafing; and LA must not be defined merely as not using a phone. Instrument content should be culturally and developmentally examined before inferential analysis (Akbulut et al., 2016; Sivrikova et al., 2019).

A stronger governance study would triangulate pupil perceptions with independently coded policy documents, teacher accounts and classroom observations, while protecting privacy and avoiding punitive monitoring. Learners are nested within classes and schools, which requires attention to clustering when estimating statistical uncertainty. Single-source responses also heighten common-method risks, and comparisons may require measurement invariance checks. Importantly, student-perceived SRI cannot be reported as objective school-level implementation fidelity without separate verification.

Cross-sectional path models cannot resolve temporal ordering or plausible reverse associations among rule experience, cyberloafing and attention. Unmeasured classroom climate, peer norms, learning motivation and prior attention may account for observed covariation. A longitudinal or ethically designed quasi-experimental study following changes in policy implementation could provide stronger evidence about sequencing and alternatives. Formal evaluation should examine whether proposed governance indicators are feasible and fair before classifying them as performance measures.

This paper uses a purposive synthesis rather than exhaustive systematic searching, and its originality claim is limited to the comparisons made. Some cited work is from universities or other national systems; contextual fit to Malaysia must be established rather than assumed. The framework deliberately omits extra constructs such as school financial resources, trust, peer norms and technological infrastructure to retain the five-construct PhD model. These factors may matter, but they are boundary conditions or future research candidates, not measured effects in the present proposal.

## Conclusion

School smartphone governance cannot be judged solely by the formal choice to prohibit or permit devices. This paper advances a bounded management-oriented conceptualisation in which learner-perceived rule implementation, routine classroom management and student self-control are associated with a task-specific behaviour—academic cyberloafing—and with the proximal educational outcome of learning attention. By distinguishing institutional enactment from frontline practice, specifying ten contestable associations and proposing responsibilities for governance review, the paper offers a clearer basis for organisational diagnosis in pre-university education. Its claims remain conceptual; subsequent empirical and implementation-sensitive research must establish whether the framework adequately describes actual school practice and student outcomes.

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Volume: 11 Issues: 69 Special Issue [October, 2026] pp. 588-601
International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116944

**Acknowledgements**
The authors gratefully acknowledge the Faculty of Defence Studies and Management, National Defence University of Malaysia, for the academic support provided during the development of this conceptual paper.

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International Journal of Accounting, Finance and Business (IJAFB)
eISSN: 0128-1844
Journal website: www.academicinspired.com/ijafb
DOI: 10.55573/IJAFB.116944

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