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Governing Higher Education in Remote Islands: The TASK Framework for Indonesia's Tanimbar Islands

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Abstract

Geographical remoteness complicates higher education governance by combining connectivity constraints, limited institutional capacity, high service-delivery costs, and uneven opportunities for students and academic staff. This article develops a context-sensitive governance framework for higher education institutions in Indonesia's Tanimbar Islands, a remote archipelagic setting. An integrative conceptual review was conducted by critically synthesizing selected peer-reviewed studies on rural digital inequality, university leadership, community partnerships, and internal quality assurance alongside Indonesian regulatory and institutional documents. The synthesis identifies four interacting management vulnerabilities: discontinuous physical and digital access; difficulties in developing and retaining academic capacity; exposure to small-scale financing and logistical risks; and quality-assurance processes that may become compliance-oriented rather than improvement-oriented. In response, the article refines the TASK framework into four mutually reinforcing governance capabilities: Transformative leadership, Adaptive digital and organizational design, Synergistic partnerships, and Kontextual (context-responsive) community engagement. The framework specifies expected mechanisms, practical indicators, sequencing, and safeguards, including offline-first learning, shared academic resources, stakeholder accountability, and evidence-based internal quality cycles. TASK is a conceptual proposal rather than a tested model; no campus-level interviews or outcome evaluations were conducted. Its contribution is an operationalizable research and policy agenda for geographically dispersed institutions, with transferability to other remote and small-island higher education systems requiring empirical assessment.

Keywords: Archipelagic Higher Education; Educational Governance; Digital Equity; Internal Quality Assurance; TASK Framework

INTRODUCTION

Higher education systems are frequently evaluated through indicators of enrollment, degree completion, research productivity, financial resilience, and quality assurance. Yet the resources needed to achieve these outcomes are distributed unequally across space. Remote island universities face a distinctive organizational problem: they must maintain nationally comparable academic expectations while delivering teaching and administration under more uncertain transport, energy, digital, and staffing conditions. Digital platforms can extend access, but access to a platform does not guarantee participation when students have weak connectivity, shared devices, or limited quiet study space (Timmis & Valladares-Celis, 2025; Ajani, 2025). As a result, strategies copied from well-resourced metropolitan universities can reproduce inequity rather than overcome it.

The geographical dimension of equity deserves explicit attention because it shapes the relationship between formal enrollment and effective academic participation. Students can be registered and still be unable to obtain timely feedback, access reading material, attend laboratory sessions, or complete placement requirements. Studies of geographically marginalized learners distinguish the nominal availability of a program from the conditions

needed to make that program usable (Mayr & Oppl, 2023; Timmis & Valladares-Celis, 2025). In island settings, a disrupted ferry connection or an extended telecommunications outage may alter an academic calendar more strongly than a conventional term-planning assumption anticipates. Thus, institutional performance should assess continuity of opportunity, not only absolute numbers of services delivered. An inclusive institutional scorecard could differentiate enrolled students, active students with usable learning access, students with delayed academic transactions, and students receiving targeted support. Such categories are presented as design suggestions, not evidence that any of these disruptions occurred at a specific Tanimbar campus.

Indonesia's Tanimbar Islands in Maluku offer a useful setting in which to examine this governance problem. The district was included among disadvantaged districts under Presidential Regulation No. 63/2020 for the 2020–2024 designation period; the present article uses the Indonesian shorthand "3T" (disadvantaged, frontier, and outermost) as a geographical and policy-context descriptor, without assuming that an earlier administrative classification automatically establishes its status in 2026 (Republic of Indonesia, 2020). The government education directory confirms the presence of Universitas Lelemuku Saumlaki in the district, but a complete current institutional census, program accreditation inventory, and staff-level dataset were not available to this review (Ministry of Primary and Secondary Education, n.d.). Consequently, the analysis is framed as a contextualized conceptual synthesis, not an institutional performance audit.

The historical designation also requires policy precision. Presidential Regulation No. 63/2020 established a time-bounded list for 2020–2024; it should not be cited as proof of a contemporary legal classification beyond that period. In this article, geographical remoteness and archipelagic exposure are the analytic features of interest. The Tanimbar discussion therefore relies on the setting described in the supplied manuscript and on a limited set of public records, not on a district-wide sample of universities. The distinction matters for international readers: the framework may be applicable to remote institutions in regions that are not formally designated disadvantaged, provided the core coordination problems are similar. It also prevents a common ecological error in place-based research, whereby district-level circumstances are used to make unverified claims about individual institutions. Campus accreditation, budgets, faculty credentials, and Internet performance must ultimately be checked through current institutional records and fieldwork before they enter an empirical case study.

For island communities, limited travel frequencies can interrupt campus-to-campus collaboration, field practice, equipment repair, and the mobility of lecturers and students. Small student cohorts may affect the feasibility of highly specialized laboratories and programs. At the same time, local networks, cultural knowledge, and place-based livelihoods can become assets for curricular relevance and community-engaged research. Evidence from rural and marginalized settings suggests that the most useful management response is not technology adoption in isolation, but the coordination of technologies, human capabilities, community priorities, and accountable institutional processes (Mayr & Oppl, 2023; Shyiramunda & van den Bersselaar, 2024; Amni et al., 2026).

Existing research addresses important pieces of this puzzle. Digital-equity studies show how costs, skills, institutional assumptions, and geography intersect (Ajani, 2025; Timmis & Valladares-Celis, 2025). Research on internal quality assurance emphasizes the alignment of purpose, people, and process (Krooi et al., 2024), while partnership scholarship highlights measurable collaboration and unequal power relations (Plummer et al., 2022; Luthuli et al., 2024). Leadership studies point to participation, organizational learning, and change capability (Riza et al., 2025; Victor et al., 2025). However, these approaches are rarely translated into one coherent decision architecture for very small, geographically dispersed higher education providers.

The article therefore addresses three questions: Which interacting governance constraints are most relevant to remote island higher education? How can existing scholarship be synthesized into an integrated managerial response rather than a collection of isolated interventions? What observable indicators and implementation sequence would permit future

assessment? The principal contribution is the TASK framework—Transformative, Adaptive, Synergistic, and Kontextual—extended from the original four-part proposal into a set of mechanisms, implementation priorities, and falsifiable propositions. “Kontextual” retains the Indonesian-derived initial K while expressing context-responsive governance in English.

Three related theoretical propositions clarify the value added by an integrative framework. Proposition 1 is that leadership and partnership capacity will be associated with greater continuity of academic service under infrastructural disruption, because collective decisions and shared resources create practical alternatives. Proposition 2 is that the relationship between technology availability and effective student participation will depend on accessible course design and the support available to learners. Proposition 3 is that community engagement can increase the perceived relevance and uptake of institutional initiatives when participation is substantive rather than consultative only. These propositions are not tested hypotheses; they specify future empirical expectations and possible disconfirming evidence. For example, if offline-first teaching materials produce no measurable improvement among students with poor connectivity, the adaptive component must be reconsidered. By linking mechanisms to counterfactual expectations, TASK can serve as a research program rather than merely a mnemonic for desirable management practices.

METHOD

The study used an integrative, concept-building review of literature and public institutional or policy documents. This approach is appropriate when the immediate objective is to combine concepts across several scholarly streams and derive propositions for subsequent empirical investigation, rather than estimate a pooled effect or quantify a prevalence rate (Snyder, 2019). The source manuscript listed Google Scholar, ERIC, Garuda, and Semantic Scholar as intended search platforms, with search phrases related to higher education management, remote institutions, digital inequality, quality assurance, and 3T regions.

For this revision, relevant studies and official documents were additionally checked through publisher pages and authoritative regulatory sources. The corpus was purposively selected for conceptual relevance, methodological transparency, and applicability to remote higher education; it was not constructed as an exhaustive database census.

The choice of an integrative review is also a decision about inferential limits. A systematic evidence review would require a reproducible retrieval date, complete platform-specific search strings, inclusion and exclusion counts, screening decisions, and an appraisal protocol. These elements are not reconstructible from the supplied document and were not invented in the revision.

The present review instead emphasizes theoretical coherence and cautious transfer of published findings, consistent with methodological discussions of narrative synthesis and transparent thematic interpretation (Snyder, 2019; Braun & Clarke, 2021). The literature base covers multiple disciplinary perspectives, making direct aggregation of empirical effects inappropriate. For this reason, the analysis identifies mechanisms and candidate indicators, and it distinguishes evidence gathered by other researchers from claims about a local institution. The approach is useful for developing an initial conceptual model, but it offers weaker support for claims about the frequency, magnitude, or causal strength of a constraint in a specific district.

Sources were treated as three distinct evidence tiers. The first comprised peer-reviewed empirical studies and research syntheses that could support transferable relationships or mechanisms, including published studies of rural universities and higher education governance. The second comprised official Indonesian legal and institutional documents that establish regulatory requirements or confirm specific institutions.

The third comprised contextual observations and implementation proposals inherited from the source manuscript; these were retained only where presented as hypotheses or planning options, not as verified site-level findings. Untraceable numerical statements, a placeholder PRISMA table, and potentially outdated legal claims in the source manuscript were omitted or corrected.

A further safeguard was to avoid treating different types of sources as interchangeable. An official regulation establishes a normative requirement but does not demonstrate that every institution has complied with it. A public institutional directory can verify a name or location but cannot independently establish the quality of instruction. An interview study from another country can illuminate a plausible mechanism, but local prevalence and institutional consequences remain unknown.

Finally, a proposed policy instrument does not become an evaluated intervention simply because the mechanism appears reasonable. Throughout this article, verbs such as “may,” “could,” and “is proposed” signal these differences. The resulting synthesis is therefore more conservative than the initial manuscript in some of its conclusions, while being more explicit about how future evidence could strengthen or overturn those conclusions. This separation of descriptive, explanatory, and prescriptive claims is particularly important when research is used to inform public investment.

The analytic procedure involved structured extraction of each source’s setting, main barrier, proposed response, and contextual limitations; clustering the extracted material into infrastructure, academic staffing, institutional finance, and quality governance; and testing whether a four-capability response could offer nonredundant mechanisms across these clusters.

The synthesis was iterative: candidate TASK capabilities were compared with evidence on digital readiness, organizational leadership, community engagement, partnerships, and internal quality assurance (Chounta et al., 2024; Krooi et al., 2024; Shyiramunda & van den Bersselaar, 2024). Triangulation refers here to comparison among documentary and literature perspectives, not to validation by campus participants. Because a complete search log, duplicate count, screening register, and quality-appraisal dataset are unavailable, the article makes no PRISMA-compliance claim.

The unit of analysis is an institutional governance challenge, not an individual respondent or a sampled university. No human participants were recruited, and no primary field observations, budget files, administrative microdata, or accreditation audits were collected. “Findings” below therefore designate literature-informed patterns and analytically reasoned proposals. Suggested indicators and outcome relationships require prospective measurement; this distinction is central to the interpretation of the TASK model.

RESULTS AND DISCUSSION

Interlocking vulnerabilities in island higher education

First, physical access and digital access can create a combined service-delivery bottleneck. Campus-level connectivity is only one element: students need affordable data, reliable electricity, usable devices, accessible learning materials, and human support. Research with rural South African university students shows that learning-management-system usefulness is constrained by unstable infrastructure, digital literacy, and differences in instructional support (Ajani, 2025).

A review of rural universities similarly identifies the interaction of infrastructure, pedagogical design, and professional development (Ajani & Maphalala, 2026). These studies do not measure Tanimbar directly, but their mechanisms are pertinent to campuses separated by sea routes and heterogeneous network coverage.

Technology-related risk operates at three levels. The first is material access: devices, electricity, connectivity, and data affordability. The second is usable access: whether a system is comprehensible, accessible to students with disabilities, and compatible with prevailing devices and learning routines. The third is realized educational benefit: whether access enables sustained academic engagement and demonstrably better learning conditions.

Digital change can fail between any two levels. Evidence from remote island communities in Indonesia emphasizes the importance of culture, literacy, and locally grounded mentoring (Amni et al., 2026), while a systematic review of rural schools documents why hardware provision without teacher capacity and context-sensitive implementation has limited effects (Mustafa et al., 2024). The school evidence is not direct university evidence, but it reinforces the need to investigate the instructional mechanisms rather than assume

technological devices are sufficient. Accordingly, any proposed digital investment should document who is excluded, how those users are supported, and what outcome will indicate a meaningful reduction in exclusion.

Second, staffing is both an academic and a governance question. Small providers may find it difficult to develop specialized expertise, supervise advanced research, or establish redundancy when a key lecturer is absent. The problem extends beyond recruitment: professional learning, distributed leadership, visiting academic arrangements, and transparent workload planning can make scarce expertise more productive.

Research on leadership capabilities and institutional performance associates change-oriented and participative leadership with organizational adaptation, although causal effects cannot simply be transported across countries or institutional types (Victor et al., 2025; Riza et al., 2025).

An academic workforce plan in this context should distinguish critical competencies from job titles. For instance, one lecturer may be capable of supervising several related courses while a laboratory specialist or data-protection officer performs a function that cannot readily be substituted. A risk-based skills inventory would identify courses dependent on a single staff member, the availability of external examiners and supervisors, professional-development needs, and the workloads created by repeated travel.

Institutional leaders can then determine which capabilities should be developed locally, which can be shared through partnerships, and which require contingency arrangements. This approach avoids making universal claims about lecturer qualifications in Tanimbar from the source document alone. It also recognizes that academic staff retention depends on fair career progression, professional identity, workable workloads, and research support—not simply an incentive for relocation. The value of leadership is thus expressed through practical workforce decisions rather than a presumed ability to compensate indefinitely for material shortages.

Third, small-scale finance and logistics interact. The same infrastructure investment can carry a higher per-student burden when enrollments are low, and imported equipment may create delayed maintenance or replacement costs. These are plausible economic mechanisms rather than verified estimates of Tanimbar university expenditure. A defensible financial strategy must therefore begin with actual cost data, shared-service analysis, contingency reserves, and explicit opportunity costs. The source manuscript's numerical claim of a 40–60% operating-cost premium was removed because no comparable institutional accounting dataset supported it.

Financial resilience should be assessed with a small number of auditable ratios. Potential measures include the proportion of recurrent costs covered by predictable income, the maintenance backlog, cost per successful course completion, the proportion of programs dependent on a single source of funding, and the proportion of equipment whose repair depends on off-island procurement.

These indicators are not substitutes for a formal financial audit. They would, however, improve comparisons between alternative investments—for example, one expensive laboratory serving a small cohort versus an enforceable shared-laboratory agreement. Cost-effectiveness analysis should include hidden costs such as travel, equipment downtime, staff time, and student expenses.

It should also avoid false economies: reducing in-person support may make a university's accounts look cheaper while shifting transport or data costs onto students. Higher education can support locally relevant productive sectors, including digital agriculture, but such initiatives require attention to social equity and workforce preparation as well as technological enthusiasm (Bampasidou et al., 2024).

Fourth, internal quality assurance can become administratively demanding precisely where institutional capacity is thinnest. Indonesia's current higher education quality-assurance regulation is Ministerial Regulation No. 39/2025, which replaced No. 53/2023 (Ministry of Higher Education, Science and Technology, 2025). The challenge is not whether standards matter—they do—but how a resource-constrained institution can turn self-evaluation, evidence collection, internal audit, and feedback into tangible improvements.

The 3P literature conceptualizes effective internal quality assurance around purpose, people, and process; Indonesian evidence also links organizational capacity and quality culture to performance (Krooi et al., 2024; Yazid et al., 2025).

A feasible quality cycle has to be small enough to operate consistently and sufficiently rigorous to support improvement. The minimal cycle involves specifying a service standard, collecting credible evidence, making an accountable corrective decision, assigning responsibility and deadlines, and reviewing whether a measurable change occurred. A program that surveys student satisfaction but does not track follow-up actions completes only part of this cycle.

The same concern applies to accreditation evidence assembled episodically by a few administrators without integration into routine teaching decisions. Research on internal quality assurance in constrained environments indicates that weak coordination and uneven institutional capacity can turn quality processes into formal compliance rather than developmental activity (Daoud et al., 2026).

Tanimbar institutions could test this risk through an annual audit of action closure and feedback quality, with mechanisms that remain aligned with Indonesian higher education standards. Quality assurance and local flexibility are compatible when basic standards are preserved and the mode of meeting them responds to geography.

These four vulnerabilities are mutually reinforcing. Weak connectivity limits library and teaching access; limited faculty capacity lowers the feasibility of quality improvement; unstable funding delays equipment and training; and weak evidence systems reduce the precision of budgeting and partnership negotiations. A technology-only intervention would miss the coordination problem. Table 1 translates the synthesis into mechanisms that institutions should investigate before setting priorities.

Table 1. Literature-informed vulnerability-to-response map for remote island higher education

Vulnerability	Mechanism requiring attention	Potential evidence / decision indicator
Access discontinuity	Connectivity, transport and electricity disruptions impede consistent instructional services.	Accessible course packages; service interruptions; student participation by location.
Academic capacity	Small staffing pools and uneven professional support limit teaching continuity and specialization.	Qualified staff retention; workload coverage; mentoring hours; shared courses.
Financial exposure	Low-volume operations, procurement and transport costs constrain predictable planning.	Verified cost per learner; recurrent cost coverage; downtime and maintenance costs.
Quality assurance overload	Compliance tasks can displace formative feedback when evidence systems are fragmented.	Closure of improvement actions; audit follow-through; student-feedback response time.

The TASK framework and its proposed mechanisms

The TASK framework presents four complementary governance capabilities rather than four independent projects. Transformative leadership (T) concerns the ability to set shared priorities, motivate staff, protect learning continuity, and revise organizational routines in response to constraints. It extends beyond charismatic leadership: its relevant mechanisms are collective problem-solving, transparent delegation, staff development, and decisions informed by evidence.

For a small university, an achievable starting point is a joint academic-and-administrative improvement team with a limited number of measurable priorities, not a large new bureaucracy (Victor et al., 2025; Riza et al., 2025).

Leadership must also address the distribution of authority. Over-centralized management can become fragile when an executive is unavailable or overwhelmed, while uncoordinated decentralization can create inconsistent rules among programs. A practical compromise is a limited delegation matrix that defines which decisions require institutional approval, which can be taken by programs, and what information triggers escalation.

Examples include decisions about temporary course delivery during connectivity interruptions, replacement teaching arrangements, and exemptions handled within existing academic regulations. A standing cross-functional team can review these cases without adding separate committees for every disruption. Leadership development could emphasize scenario-based exercises in budget reprioritization, academic integrity, stakeholder conflict, and interinstitutional negotiation.

These are proposed practices, not evidence of successful implementation. Their rationale lies in the need for decisions to remain explainable and repeatable under uncertainty, even when personnel or transport access changes.

Adaptive design (A) applies to digital systems and the organizational arrangements surrounding them. An offline-first course is useful only when materials remain updated, assignment submission is synchronized predictably, assessment integrity is protected, and instructors can support students who have different devices and data budgets. A practical design hierarchy should prioritize low-bandwidth materials, downloadable modules, mobile-compatible files, asynchronous feedback, and resilient student-record workflows before expensive advanced technologies. Digital-readiness research supports auditing data infrastructure, skills, strategy, and processes rather than assuming that a single platform indicates transformation (Chounta et al., 2024; Mayr & Oppl, 2023).

A resilient learning architecture might offer each course in three compatible forms: a compact downloadable reading pack, a low-data asynchronous communication channel, and scheduled opportunities for supported interaction. Assessment should specify what happens when evidence cannot be uploaded on time because a network outage is documented, while maintaining equitable grading and academic integrity.

Staff training must be included in the investment decision: a platform with substantial features may deliver less value than a simpler environment used competently by teachers and students. Rural digitalization research shows that social acceptance, organizational support, and local requirements are as important as technical provision (Sommer et al., 2025). An adaptive strategy should therefore be iterative, with usability testing and feedback from students with the weakest access conditions. A local synchronization solution or satellite-based service should be considered only after contractual costs, data security, maintenance, and coverage requirements are demonstrated.

Synergistic partnerships (S) enable access to capabilities that a geographically isolated institution cannot efficiently maintain alone. Cooperation may cover staff exchanges, shared library licenses, visiting lecturers, joint research supervision, laboratory access, curriculum review, and evidence-based quality mentoring. However, partnership agreements can reproduce resource or decision-making asymmetries unless deliverables, governance rights, funding commitments, and reciprocity are negotiated in advance (Bidandi et al., 2022; Luthuli et al., 2024). Performance should be judged by delivered services and capability transfer, not counts of signed memoranda (Plummer et al., 2022).

Partnership governance should begin with a capability gap rather than a preferred partner name. A university needing laboratory access should specify the number of students, acceptable turnaround times, safety obligations, and cost-sharing rules before proposing a collaboration. An institution requiring research supervision should specify supervisory loads, intellectual contribution, scholarly credit, and mentoring outcomes.

Each agreement should contain a reciprocal work plan, designated coordinators, a data-sharing protocol where applicable, a review schedule, and an orderly exit procedure. A small island university should retain control over curriculum decisions and the representation

of local communities even when an external organization supplies important resources. The risk of unequal bargaining power is not hypothetical in university partnerships generally (Luthuli et al., 2024), but the presence or magnitude of such risk in any future Tanimbar agreement must be assessed case by case. This governance discipline distinguishes capacity development from dependence on goodwill or temporary project grants.

Kontextual engagement (K) treats local cultural and economic contexts as inputs to academic decision-making rather than mere outreach destinations. Relevant actors may include students, traditional and civic leaders, employers, local government, and community organizations. Course projects can address marine and agricultural value chains, education, public administration, climate resilience, and locally defined research questions, subject to community consent and academic standards.

Evidence from community-based and Indigenous programs suggests that locally meaningful partnerships, accessible participation, and institutional flexibility can support inclusion (Chenoweth et al., 2026; Shyiramunda & van den Bersselaar, 2024). The local customary institutions referenced in the original manuscript, including duan–lolat, require direct consultation and ethical engagement before operational design is claimed.

Place responsiveness requires structured participation rather than the symbolic inclusion of a traditional leader's name in a committee. Community partners should have opportunities to identify problems, question proposed projects, approve reasonable use of locally contributed information, and receive accessible reports on outcomes. Institutions should be cautious when translating culturally specific norms into formal governance procedures, especially if those norms have multiple interpretations or if some groups are less visible in established structures.

Participation procedures should therefore include women, younger residents, students, and groups located outside the administrative center where feasible. Culturally responsive academic work can still meet national standards in curriculum design, ethics, and research quality. The proposed indicators include the proportion of initiatives shaped by documented community input, feedback resolution, and partner-reported usefulness. These are prospective metrics and should be reviewed for unintended consequences, such as excessive consultation fatigue or concentration of influence among prominent stakeholders.

The model assumes complementarity. Leadership establishes priorities and accountability; partnerships bring skills and resources; adaptive design reduces operating friction; and contextual engagement protects relevance, legitimacy, and uptake. A leadership initiative without community participation may impose inappropriate priorities. A partnership without explicit mutual benefit may produce symbolic agreements. A technology investment without digital inclusion may widen gaps. Accordingly, a proposed intervention must be evaluated not only within its own dimension but also for its effects on the other three (Table 2).

Table 2. TASK dimensions, hypothesized mechanisms, and candidate indicators

Capability	Governance mechanism	Illustrative intervention	Prospective indicator
T — Transformative	Distributed leadership and learning cycles	Quarterly priority reviews; staff mentoring; corrective-action decisions	Staff participation; improvement actions completed on time
A — Adaptive	Inclusive, resilient service design	Offline-first modules; low-bandwidth systems; scheduled sync	Course accessibility; outage-related learning disruption
S — Synergistic	Reciprocal interinstitutional resource sharing	Joint supervision; reciprocal teaching; laboratory-sharing agreements	Delivered teaching hours; shared resources used; partnership renewal

Capability	Governance mechanism	Illustrative intervention	Prospective indicator
K — Kontextual	Community voice and place-responsive curriculum	Community advisory processes; local capstone challenges	Documented community input; student projects applied locally

Sequencing, safeguards, and transferability

An implementable model requires sequencing. During an initial diagnostic phase, institutional leaders should map connectivity, learning continuity, staff capacity, academic costs, and existing quality-assurance routines using transparent baselines. A second phase should combine early gains—such as standard downloadable course packs and shared staff development—with signed, outcome-specific partnership arrangements. Only after foundational service reliability and internal feedback mechanisms are established should institutions expand major platforms, specialized laboratories, or advanced technologies. The phase lengths shown in Table 3 are planning ranges, not evidence of how long implementation takes in Tanimbar. Priority-setting can be made explicit through a lightweight decision matrix. Each candidate intervention would be judged against four dimensions: urgency of student-facing disruption, expected educational value, affordability over a full operating cycle, and feasibility given local staff and partner capacity. Rather than assign arbitrary numerical scores, an institution should first agree on the evidence and thresholds for each dimension. A high-profile technology purchase that does not improve access for the least-connected students might rank below a lower-cost package of teaching continuity measures. Conversely, a specialized laboratory may be justified if it provides unique learning outcomes that cannot be achieved through shared provision. The matrix should also record dependencies: a new administrative platform may require a designated data steward, staff training, and a stable power supply before procurement. These practical conditions embody the sequencing logic of TASK and make the reasoning open to faculty, students, and public partners.

Table 3. Proposed TASK implementation roadmap and evaluation checkpoints

Horizon	Priority decisions	Responsible units / partners	Checkpoint
0–6 months: diagnose	Map access barriers, teaching continuity, staff workloads, costs and quality cycle; co-design priorities.	Rectorate, quality office, program heads, student/community representatives.	Approved baseline, risk register and two or three prioritized improvements.
6–18 months: stabilize	Deploy offline-first learning; pilot faculty mentoring, shared teaching and action-tracking dashboard.	Programs, IT services, partner institutions, quality office.	Documented utilization, academic continuity and closure of improvement actions.
18–36 months: consolidate	Evaluate cost-effectiveness; scale successful partnerships and digital services; update curricula.	Leadership board, finance office, external evaluators, community partners.	Comparison against baseline, equity audit and independent feedback.

To avoid equating activity with impact, each intervention should have at least one process measure and one student-centered outcome measure. For instance, deployment of downloadable teaching materials can be tracked as a process, while module completion, delayed submissions attributable to connectivity, and student-reported accessibility provide

provisional outcomes. Joint teaching can be counted in delivered hours, but its value should also be investigated through course quality and continuity. Quality-assurance meetings should be linked to documented and verified corrective action, not merely meeting frequency (Krooi et al., 2024; Plummer et al., 2022).

A simple evaluation design could combine baseline and follow-up measures in participating institutions, semi-structured interviews with lecturers and students, document audits, and equity-sensitive comparison across island or connectivity categories. A multiple-case study could test whether institutions with stronger T and S capabilities achieve more reliable A implementation and more meaningful K participation. Where feasible, matched comparison sites and interrupted time-series indicators could improve causal inference, although migration, funding shocks, and changes in government policy would require careful consideration. Such tests would permit TASK to be revised or rejected, rather than treating it as established best practice.

For quantitative evaluation, institutions could track course attendance or equivalent engagement, timely credit completion, student continuation, time to resolve academic services, and completed internal-quality actions over at least two academic cycles. Denominators and missing-data rules would have to be stable across campuses and semesters. For qualitative evaluation, researchers could interview management teams, students living in different connectivity conditions, lecturers, community partners, and external academic collaborators. An evaluation protocol should specify how conflicting accounts will be preserved, how participants will be protected, and how negative evidence will be reported. Particular attention should be paid to attribution: an observed improvement may reflect a subsidy, infrastructure upgrade, change of cohort, or changes in university policy rather than TASK implementation itself. Evidence should therefore be interpreted as an evolving contribution story until comparative or longitudinal designs are capable of supporting stronger causal conclusions.

Transferability must be specified rather than assumed. Evidence from South African universities is informative about how bandwidth, affordability, and institutional support interact, but the Indonesian regulatory system, transport network, funding regime, and local languages are different (Ajani, 2025; Timmis & Valladares-Celis, 2025). Similarly, findings from another Indonesian island indicate how social identity and intergenerational learning can mediate digital inclusion, but do not establish the same practices in Tanimbar (Amni et al., 2026). TASK should therefore be adapted through local evidence collection, not implemented as an imported standardized package.

Financial, ethical, and regulatory safeguards are essential. A governance dashboard can expose sensitive student data unless access rules and retention practices are defined. Shared provision can create dependency if a partner withdraws. Community consultation can become extractive if local participants have no role in deciding how findings are used. Remote-teaching efficiency may reduce face-to-face learning opportunities for the students who need them most. These trade-offs imply governance checks on privacy, access equity, staff workload, academic independence, partner reciprocity, and compliance with current national quality-assurance requirements (Luthuli et al., 2024; Ministry of Higher Education, Science and Technology, 2025).

The theoretical contribution is modest but specific. Digital-equity studies have typically emphasized access and instructional support; internal quality-assurance studies emphasize purpose, people, and process; partnership studies emphasize collaboration and accountability; and leadership studies emphasize organizational capability. TASK connects these strands through an island-specific sequencing logic: T and S can lower coordination and resource barriers, A can provide resilient academic services, and K can strengthen relevance and legitimacy, while quality-assurance feedback evaluates all four. This integration is a testable conjecture rather than evidence that any one dimension is a statistically established determinant of outcomes.

CONCLUSION

Remote island higher education requires integrated governance, not isolated investments in connectivity or accreditation paperwork. This integrative review proposes

TASK—Transformative leadership, Adaptive design, Synergistic partnerships, and Kontextual engagement—as four linked capabilities for improving academic continuity and equity. Its distinctive contribution is a phased implementation logic with observable indicators and safeguards. Institutions should first establish local baselines, prioritize service reliability, negotiate reciprocal partnerships, and connect internal quality assurance to corrective action. TASK has not been validated in Tanimbar; its effectiveness and transferability should be tested through multi-institutional field studies and longitudinal evaluation.

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