

Effectiveness of Performance Contract Planning in Enhancement of Development of Physical Infrastructure in Public Technical Training Institutions in Kenya: A Study Across Technical Training Institutes in Kakamega County.

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ABSTRACT

The government of Kenya invests heavily in Technical and Vocational Education and Training (TVET). This has necessitated signing Performance Contracts to ensure that the resources allocated to TVET institutions are prudently utilized to achieve the intended goals. Infrastructure development in TVET institutions is critical for trainees to develop the desired competences fully. The objective of the study was to examine the effectiveness of Performance Contract (PC) planning in enhancing development of physical infrastructure. The Context, Input, Process and Product (CIPP) evaluation model by Daniel L. Stufflebeam (1966) was used to examine the effectiveness of performance contract planning in enhancing the development of physical infrastructure in public TVET institutions in Kenya. The study established that while Performance Contracts planning was effective in instilling accountability and providing a sense of institutional direction, its effectiveness in driving tangible infrastructure development was undermined by limited inclusivity of stakeholders, poor alignment with available resources, and unrealistic ambition. Quantitatively, 25 of 30 projects (83%) reviewed by PC Coordinators were executed with alignment to both strategic priorities and available resources, while 5 projects (17%) experienced partial alignment due to funding delays or internal resource limitations. This aligns with observed implementation outcomes, where Government of Kenya funded projects had higher completion rates (average evaluation score 82%) than internally funded projects (average evaluation score 50%). Performance Contracting planning were effective in setting strategic intentions and producing comprehensive documents however, the processes were weakened by poor feasibility assessment. The study concluded that Performance Contracting in enhancing development of physical infrastructure was effective as more than 80% of the infrastructure targets were achieved. The study recommended Planning, that mandate structured consultation with principals, Heads of Departments, technical staff, and implement make it a requirement that all planning processes incorporate feasibility studies and audits of available financial, technical, and human resources, thereby reducing the likelihood of stalled or partially completed projects. The findings of the study are significant to the Government of Kenya Policy Formulation and review in Performance Contracting, Principals of public Technical Training Institutes who make proposals and Researchers in related fields by providing baseline information.

Key Words: Effectiveness, Performance Contract Planning, enhancement, development, Physical Infrastructure Public Technical Training Institutions, Kenya: A study across Technical Training Institutes, Kakamega County.

INTRODUCTION

The public sector carries the responsibility to effectively and efficiently deliver public services despite the changing turbulent environment, financial constraints and the pressure to innovate and improve the performance forcing organizations to introduce effective management control methods and tools like management control system (Felicio, Samagaio, & Rodrigues (2020). Daristu, (2022) found out that the use of performance contracts, Performance Contract planning inclusive, in education and training sectors reflects a broader international trend toward linking institutional autonomy with measurable performance outcomes. Salama, (2021) indicated that managers prefer using of management based tools as they contribute towards the achievement of their personal

goals as well as organizational goals. This therefore means that the organizations without proper management system, and in particular performance contract planning will still have to live with poor service delivery. Kiboi and Maalu, (2023) admits that organizations operate in turbulent environment that are drastically having fast fundamental changes and the sure responses towards this turbulent environment is to introduce performance contract planning as part of the reform in the broader public sector to improve efficiency and effectiveness in service delivery and management.

Globally, public sector institutions have increasingly adopted performance management reforms as governments seek greater efficiency, accountability, and value for money in the delivery of public services. Over the past decade, many countries have shifted toward Results-Based Management and performance contracting systems to address persistent administrative inefficiencies, strengthen institutional accountability, and improve transparency in the utilization of public resources. Recent international analyses emphasize that performance agreements whether labelled as performance contracts, service contracts, or results frameworks provide a structured mechanism for aligning institutional targets with national development priorities, allocating resources based on measurable outputs, and enhancing oversight of public agencies (OECD, 2020; World Bank, 2021). At the same time, global attention has increasingly turned to the role of Technical and Vocational Education and Training systems in addressing skills shortages and driving economic competitiveness. International organizations such as the International Labour Organization, UNESCO-UNEVOC, and the World Bank consistently note that the effectiveness of TVET systems depends significantly on the quality, adequacy, and modernity of physical infrastructure, including workshops, laboratories, ICT facilities, and training equipment (UNESCO-UNEVOC, 2021; ILO, 2022; World Bank, 2023).

In Ghana, inclusion of departmental heads and technical staff in planning and evaluation resulted in higher completion rates of infrastructure projects and better alignment with institutional needs (Osei-Tutu & Asare, 2021). Conversely, institutions that relied solely on top management for decision-making often experienced misaligned priorities, overambitious targets, and stalled projects, highlighting that stakeholder engagement, realistic planning, and institutional learning are crucial for translating PCs from compliance tools into instruments that genuinely enhance infrastructure development. In the education sector, PCs have been applied to enhance institutional management, resource allocation, and infrastructure development. For instance, in Uganda, recent studies show that PCs in public universities contributed to improved adherence to strategic plans, timely completion of capital projects, and more efficient budget utilization (Mugisha & Basheka, 2020).

In Kenya, Performance Contracts are employed in public sector institutions to link performance appraisal with financial and non-financial incentives, motivating institutional leaders to achieve infrastructure and service targets (Gichuki & Mbithi, 2021). Kenya has been at the forefront of public sector performance reform in Africa, with Performance Contracting emerging as a central pillar, (courtesy of PC planning), of its results-based management framework. Since the early 2000s, the Government of Kenya has implemented PCs across Ministries, Departments, Agencies, State Corporations, public universities, and increasingly within Technical Training Institutions (TTIs). The objective has been to institutionalize a culture of accountability, improve efficiency in resource utilization, enhance service delivery, and align institutional outputs with the goals of the national development agenda, including Vision 2030, the Medium-Term Plans, and the Bottom-Up Economic Transformation Agenda. This study therefore sought to examine effectiveness of PC Planning in enhancing Development of Physical Infrastructure in Public Technical Training Institutes.

Synthesis of Literature on Effectiveness of Performance Contract Planning in Enhancing Development of Physical Infrastructure in Public Technical Training Institutes

Effective planning under performance contracts is central to ensuring that physical infrastructure projects in public technical training institutions are feasible, adequately resourced, and aligned with institutional priorities. Results-Based Management principles suggest that planning should systematically link inputs, activities, outputs, and outcomes to ensure measurable results (UNDP, 2020). By incorporating feasibility assessments, resource allocation, risk management, and contingency measures, planning under PCs can prevent project delays, optimize the use of financial and human resources, and improve infrastructure delivery outcomes (Gichuki & Mbithi, 2021).

In India, Rao and Sharma (2021) reported that PC planning frameworks incorporating feasibility analyses and participatory inputs significantly reduced project delays and bureaucratic bottlenecks in public education institutions. Salleh (2020) observed that public universities in Malaysia with established internal coordination structures and robust planning protocols experienced higher success in meeting infrastructure target. In South Africa, Mthethwa (2020) demonstrated that TTIs that engaged departmental heads and technical staff in the planning phase achieved higher adherence to timelines, better budget utilization, and more successful project outcomes. In Uganda, Mugisha and Basheka (2020) found that inclusive planning processes under PCs led to more realistic scheduling, improved resource allocation, and stronger mechanisms for tracking progress. Osei-Tutu and Asare (2021) similarly found that collaborative planning across departments enabled more accurate estimation of project requirements, minimized resource wastage, and increased the completion rate of infrastructure projects in Ghanaian polytechnics.

In the Kenyan context, recent studies indicate that while PCs provide a structured framework for infrastructure project planning, practical implementation often faces challenges. Muriithi and Wanjiku (2020) observed that insufficient consideration of technical, financial, and human resource capacities frequently leads to stalled projects in Technical Training Institutes (TTIs). Similarly, Otieno and Wambua (2021) highlighted that misalignment between planned activities and institutional capabilities undermines the efficiency of PC planning, while weak departmental involvement reduces ownership and accountability. Mutua and Muema (2021) further reported that inadequate risk assessment and poor coordination between administrative and technical units exacerbate delays in infrastructure execution. These studies suggest that the effectiveness of PC planning in public TTIs is contingent upon participatory approaches, alignment of activities with institutional capacities, comprehensive feasibility assessments, and integration of monitoring and feedback mechanisms. Planning that considers technical realities, resource availability, and institutional coordination enhances the likelihood of achieving targeted infrastructure outcomes, while top-down or poorly integrated planning significantly reduces PC effectiveness. The vetted PC should be cascaded by signing lower-level Contracts in Departments and downstream institutions and subsequently, link specific deliverables and targets to individual officers through work plans and the staff performance appraisal. It is also a requirement to align the cascaded PCs to other planning tools such as the Procurement and Cash Flow Plans, to effectively facilitate achievement of the performance targets (Republic of Kenya, 2024).

THEORETICAL FRAMEWORK

The implementation and effectiveness of PCs in public TTIs can be understood through multiple theoretical lenses. Key theories include: Principal-Agent Theory (Stephen Ross (1973), Barry Mitnick (1970s) and Michael Jensen and William Meckling (1976) which provides a foundational lens, explaining the relationship between a government ministry, and an agent, such as a TTI principal, in terms of delegation, accountability, and alignment of incentives (Eisenhardt, 2018). Within the context of PC target-setting, this theory highlights how clearly defined responsibilities and performance expectations reduce information asymmetry between principals and agents, thereby promoting compliance and ensuring that infrastructure goals are effectively pursued. Results-Based Management (RBM) Theory further informs understanding of PC implementation by focusing on the systematic linkage of inputs, processes, outputs, and outcomes to achieve measurable results (UNDP, 2020). Results based Organization provides the conceptual foundation for monitoring and reporting under PCs, emphasizing the need for evidence-based tracking of progress and performance. By ensuring that resource utilization and project activities are continuously assessed against agreed-upon indicators, RBM supports informed decision-making and efficient allocation of resources in infrastructure development.

Finally, Institutional Theory explains how organizational behavior and performance are shaped by formal rules, normative pressures, and governance structures within which public institutions operate (DiMaggio & Powell, 2019; Scott, 2020). Applied to PC planning and the evaluation of PCs, this theory illuminates how compliance with national policies, legal frameworks, and institutional performance standards influences TTI practices in assessing the effectiveness of PCs in enhancing development of infrastructure projects. Institutional pressures drive adherence to established norms and procedures, ensuring that PC planning and evaluation processes are systematic, transparent, and aligned with broader policy objectives. Conceptually, PCs are grounded in performance management theory, which posits that clearly defined targets, PC planning, aligned incentives, and

systematic monitoring can enhance organizational efficiency and service delivery (Armstrong & Baron, 2005). Empirical studies have highlighted both the strengths and limitations of PCs in public institutions. Performance Contract planning provide a structured framework for setting priorities, allocating resources, and tracking progress, which can improve transparency and institutional accountability and challenges such as top-down target setting, limited inclusivity, unrealistic expectations, and inadequate capacity for monitoring and evaluation have been identified as constraints that reduce the effectiveness of PCs planning in achieving intended outcomes (OECD, 2020; Ministry of Education, 2022).

CONCEPTUAL FRAMEWORK

The conceptual framework was informed by the Context, Input, Process, and Product (CIPP) Evaluation model originated by Daniel L. Stufflebeam in 1966. Context, Input, Process, and Product evaluation model is a comprehensive model that is designed to evaluate effectiveness of programs, projects *inter alia*. In this respect, the Context, Input, Process, and Product Evaluation model was adapted as shown in Table 1.

Table 1 Context, Input, Process, and Product Evaluation Model of examining effectiveness of Performance Contract Planning in enhancement of Physical Infrastructure in Public Technical Training Institutions (Adapted from Stufflebeam, 1966)

Context Evaluation	Input Evaluation	Process Evaluation	Product Evaluation
Technical Training Institute Physical infrastructure development through PC planning designs: workshops, sheds, lecture rooms, washrooms, playground, offices, walkways, ramps, alleys, lifts water points	- Stakeholders - Principal of TTIs - Heads of Department - Trainers - Trainees - Support staff	Development of performance contract	- Completeness of projects - Laboratories - Hostels - Staff houses - Offices - Lecture rooms - Workshops - Shades - Library - Playgrounds - Amenities - Entertainment centres - Recreation site - Sports centres - Student centres
Quality of materials	State department of TVET	Vetting	Evidence based observation reports
Functionality of apparatus, materials, equipments	Strategic plan - Budget - TTI signed performance contract	Monitoring and Evaluation of performance contract	Portfolio of evidence of report
Problems and challenges associated with infrastructure	Inclusivity of planning process	Signing of performance contract	Triangulated reports
Financial status	Alignment with institutional priorities and available resources	Implementation of performance contract report	Portfolio of evidence of report
Human resource	Expertise of work force in contract planning	Identification of planning gaps	Portfolio of evidence of report with focus on qualification and experience

Explicit allocation of financial resources	Budget	Portfolio of evidence of report	Portfolio of evidence of report
Consideration of risks and contingencies	Contract	Portfolio of evidence of report	Portfolio of evidence of report
Governance structures	Contract	Portfolio of evidence of report	Portfolio of evidence of report

Table 1 is the Context, Input, Process, and Product Evaluation model adapted from Stufflebeam 1966. The model was used to guide the examination of effectiveness of PC planning in enhancing the development of physical infrastructure in public training institutes in Kenya, using Kakamega as the site for the study specifically PC planning is undertaken to facilitate provision of physical facilities in TTIs.

The first step was to undertake context evaluation, which included Technical Training Institute Physical infrastructure development through PC planning designs, Quality of materials, Functionality of apparatus, materials, equipments, Problems and challenges associated with infrastructure, Financial status, Human resource, Explicit allocation of financial resources and Consideration of risks and contingencies. On this basis step II that is Input evaluation was considered which included Stakeholders, State department of TVET, Strategic plan, Inclusivity of planning process and Alignment with institutional priorities and available resources. Step II translated to Step III that is, process evaluation and this involved Development of performance contract, Vetting, Monitoring and Evaluation of performance contract, Signing of performance contract, Implementation of performance contract and Identification of planning gaps. Step III culminated into step IV product or output evaluation that was the measure or indicator of outcomes effectiveness. That is, Completeness of projects; Laboratories, Hostels, Staff houses, Offices, Lecture rooms, Workshops, Shades, Libraries, Playgrounds, Amenities, Entertainment centres, Recreation sites, Sports centres and Student centres depending on individual institution's needs. The degrees of completeness, indicative of effectiveness were as the performance contracting guidelines.

RESEARCH METHODOLOGY

The study design applied was a descriptive survey research. Six public TTI principals, 6 PC coordinators, 16 Heads of Departments, 16 Technical Staff and 12 Implementers were selected by saturated use of purposive sampling technique. Interview schedules, document analysis guides, Observation schedules and Focus Group Discussions were used for data collection. Face and content validity was established by experts in the Faculty of Education. Reliability was established by piloting study in two institutions and calculating inter-rater reliability for qualitative instruments. Quantitative data was analyzed using descriptive statistics in form of frequency counts and percentages. Qualitative data from interviews and document analysis guide were transcribed and analyzed for content in emergent themes and sub themes.

RESULTS

Research Objective

The research objective was to examine the effectiveness of performance contract planning in enhancing the development of physical infrastructure.

The study assessed the planning processes, inclusivity of stakeholders, and alignment of projects with institutional resources and priorities, explicit resource allocation, incorporation of risk and contingency measures, and identification of planning gaps or limitations in order to determine the effectiveness of performance contract planning in enhancing the development of physical infrastructure. The study engaged multiple stakeholders according to their strategic, operational, and technical responsibilities that is, Principals, PC Coordinators, Heads of Departments, Technical Staff and Implementers.

The study focused on six domains; each linked to specific stakeholders: planning process for infrastructure projects which examined formalized procedures, documented frameworks such as Gantt charts, and alignment

of planning steps with target setting. Principals provided strategic approaches; PC Coordinators documented operational processes- HODs were excluded at this stage; inclusivity in planning participation: that evaluated the involvement of principals, PC Coordinators, HODs, and other stakeholders in planning meetings and committees, including the breadth of departmental representation; alignment with resources and institutional priorities which examined the extent to which plans referenced strategic documents, aligned with budget envelopes (government allocations, grants, internally generated revenue), and prioritized projects consistently across PCs and institutional plans; explicit resource allocation that assessed whether plans clearly itemized financial, human, and material resources, and whether budget lines were traceable in institutional records; risk and contingency planning that explored the inclusion of risk assessments, contingency measures, and documentation of common risks such as funding delays, procurement challenges, and operational shortages; and, planning gaps or limitations that identified systemic, coordination, and operational gaps, including inadequate resources, bureaucratic bottlenecks, and lack of technical feasibility studies.

Principals offer strategic oversight, alignment with institutional priorities, high-level risk management while PC Coordinators were key persons in operational planning, documentation, monitoring of resources and implementation. HODs were involved in Technical validation, feasibility assessment, and departmental resource verification. Technical Staff and Implementers offered practical insights into project execution, resource gaps, and operational challenges. This multi-level framework ensured complementary perspectives across strategic, operational, and technical levels, enabling a comprehensive assessment of PC planning effectiveness. The findings were as shown in Table 3.

Table 3 Triangulation Summary of effectiveness of Performance Contract Planning in enhancing Infrastructure Development in Technical Training Institutes

Domain / Focus Area	Principals (n=6)	PC Coordinators (n=6)	HODs (n=16)	Technical Staff (n=16)	Implementers (n=12)	Observation / Documents	Triangulated Assessment Insight
1. Planning Processes	100% affirmed structured planning; 67% with documented schedules	50% had complete operational records; noted gaps in updates	Excluded at this stage	Not applicable	Not applicable	Only inst. A, B, C had traceable frameworks; higher PC scores (72–78%)	Strong strategic planning, but operational documentation inconsistent
2. Inclusivity in Planning	Reported broad-based participation, but often top-heavy	Confirmed operational involvement, limited HOD input	56% involved only at verification stage	62% excluded from early stages	60% excluded from early stages	Minutes lacked lower-level signatures	Inclusivity partial and hierarchical; bottom-up input limited
3. Alignment with Resources & Priorities	83% confirmed alignment with strategic/national priorities	Aligned plans with budgets, but IGAs/fees unreliable	62% said departmental needs omitted	Reported gaps between resources and capacity	Reported misalignment in implementation	Inst. A–C aligned better; higher scores (72–78%) vs. 5–6 (68–70%)	Strong alignment with national priorities, weaker alignment with departmental realities
4. Explicit Resource Allocation	Claimed itemized budgets; noted external delays	Financial records showed allocations, only 4/6 traceable fully	Reported partial allocations, especially materials/staff	75% reported shortages, esp. fee-funded projects	58% confirmed severe shortages	GOK-funded labs complete; fee-funded hostels/staff housing stalled	Adequate for Government of Kenya-funded projects; weak for fee/IGA-funded projects
5. Risk & Contingency Planning	33% had documented contingency measures	Risks noted but mitigations were reactive	Highlighted disruptions in teaching due to delays	Reported mismatched/de layed supplies	Reported contractor/s taff coordinatio n risks	Insti. A&B had fewer disruptions due to risk plans; inst. E, F more exposed	Risk planning underdeveloped; responses mostly reactive

6. Planning Gaps/Limitations	Highlighted funding & policy shortfalls	Bureaucratic bottlenecks in procurement	Weak feasibility checks; projects mismatched needs	Reported operational shortages, mismatched supplies	Reported execution inefficiencies	Stalled projects (hostels, housing, playgrounds) common	Systemic gaps across finance, feasibility, and coordination
Clarity of Roles	Roles defined strategically	Roles defined operationally	Moderate clarity	69% unclear roles, esp. execution	58% reported overlaps	Delays traced to unclear role boundaries	Clarity moderate at senior levels, weak at technical levels
Adequacy of Resource Allocation	Reported adequacy at strategic level	Confirmed allocations but noted shortages	Partial adequacy at departmental level	62% partial/delaye; 25% severe shortages	42% severe shortages	Adequate in Government of Kenya-funded, weak in fee-funded	Adequacy variable, dependent on funding source consistency

Domain 1: Planning Process for Infrastructure Projects

This domain assessed how principals applied formalized procedures, documented frameworks, and strategic oversight in aligning planning steps with infrastructure target setting under Performance Contracts (PCs). With regard to the use of formalized planning procedures, the study established that Six 6 principals (100%) confirmed that planning began with a review of institutional strategic plans and PC templates. Gantt charts were included in 5 out of 6 institutions (83%) to track project timelines while one institution relied on narrative schedules only. Data from document analysis revealed that minutes showed explicit references to target timelines for infrastructure, including approval chains. Principal -3 stated: “We ensure every infrastructure target has a timeline, cost estimate, and approval stage in the PC planning document.” While Principal 5 stated: “Our Gantt charts allow us to visualize overlaps and dependencies, which is critical for timely execution.” Five principals (83%) indicated that they actively cross-checked proposed projects against available funding that is. Government of Kenya, Income Generating Activities and fees, and institutional priorities to ensure alignment of planning steps with target setting. PC planning included prioritization based on strategic value, such as safety -perimeter fence, hostel roofs and functional need -workshops, laboratories.

Data from document analysis revealed that for Institution A, FY 2019/2020 administration block refurbishment was explicitly referenced in both PC submission and institutional development plan while for institution D, FY 2022/2023 security lighting project aligned with risk mitigation plans documented in annual PC reports. With regard to clarity of roles and responsibilities in Planning, 4 principals (67%) reported clear delineation of responsibilities across departments, while 2 (33%) noted occasional overlaps that required clarification during execution. Principal -1 noted: “Roles are generally clear; our responsibility is strategic oversight, not day-to-day operations. Confusion occurs when departments do not update progress on time.” Principal -4 stated: “Sometimes targets are ambitious, and we need to remind staff of what is feasible within budget and timelines.”



Complete and operational 4 Storey Tuition Block of Institution A FY 2019/2020



Civil Engineering Hall of Institution D FY 2022/2023

Data from observation and document analysis revealed that Projects with complete documentation and formalized planning such as 2019/2020 Administration block in institution A, and 2019/2020 Science laboratory in Institution B attained higher evaluation scores, that is 85% and 84% respectively while projects with partial or delayed documentation such as 2021/2022 playing ground in institution D stalled at 40%) corresponded with lower evaluation scores (48%). This indicated a strong correlation between formalized planning by principals and target achievement. Key points noted from principals under domain 1 were: Strategic oversight and formalized planning were well-established in most institutions; use of Gantt charts and documented procedures correlated with higher completion rates and evaluation scores; Role clarity was high (67–100%), though occasional overlaps required mid-course corrections; and, alignment with institutional priorities was consistently applied, ensuring that high-value projects received attention and resources.

All 6 PC coordinators (100%) confirmed using PC templates provided by the State Department as the baseline planning tool with regard to operationalization of planning while 5 of 6 (83%) PC coordinators documented projects with detailed milestones and deliverables. One institution used broad timelines without specific deliverables. Monitoring schedules were attached to PC submissions in 4 institutions (67%). PC Coordinator -2 noted: “Our role is to break down the targets from principals into measurable milestones with dates, costs, and responsible officers.” While PC Coordinator 5 stated: “We keep the planning practical-every Gantt chart we generate has to match procurement timelines, otherwise it’s unrealistic”. The study also found out that 4 PC coordinators (67%) included resource allocation matrices such as financial, staff, materials in planning documents with regard to documentation and monitoring of resource allocation as opposed to 2 (33%) who relied on verbal updates and ad-hoc tracking. Data from document analysis, for example, from Institution B showed donor contributions that is, library ICT upgrade 2022/2023 which was clearly tracked in the PC monitoring sheet. PC Coordinator -4 noted: “Donor contributions are often under-reported, but we make it a point to document even small inputs, since they reduce institutional costs.”

Feedback from Focus Group Discussion revealed that 5 of 6 coordinators (83%) felt monitoring was consistent and timely, though gaps existed when procurement delays disrupted planned milestones. For example, institution E’s 2020/2021 hostel construction stalled at 40%-PC coordinator’s notes confirmed “procurement bottlenecks.”



Hostel of Institution C FY 2021/2022

Data from document analysis indicated that monitoring templates included traffic-light systems (green, amber, red) to show project progress in 3 institutions. With regard to clarity of roles and operational challenges, the study found that all 6 PC coordinators (100%) understood their roles as intermediaries between strategic leadership (principals) and technical staff (HODs, implementers). However, 3 of 6 (50%) highlighted that overlapping responsibilities sometimes slowed down approvals. PC Coordinator -1 stated: “We are expected to coordinate everything, but approvals take time—sometimes our plans are overtaken by events.”

Data from document analysis and observation revealed that projects with strong coordinator-led planning and monitoring such as institution B, FY 2020/2021 library expansion, 85% score and institution E, FY 2022/2023 ICT lab, 84% score achieved high evaluation outcomes. Weak or incomplete documentation such as FY 2020/2021 drainage works, stalled at 40% and 48% score reflected poorly coordinated planning and inadequate monitoring. PC Coordinators’ operational planning thus strongly correlated with project outcomes.



Upgraded ICT Laboratory of Institution E FY 2022/2023

Key points noted from PC Coordinators under domain 1 were as follows: operational planning was robust where coordinators applied formal monitoring tools, resulting in higher evaluation scores; documentation gaps in 2 of 6 institutions contributed directly to stalled or underperforming projects; PC Coordinators were clear on their role as operational planners but faced systemic delays from procurement and approvals, and, Triangulation shows that effective PC Coordinator-led planning is a critical success factor for infrastructure projects under Performance Contracts.

Domain 2: Inclusivity in Planning Participation

Analysis of the principals' perspectives revealed that participation in planning processes was largely centralized at the strategic level, with the Board of Management and senior administrative staff taking lead roles. All six principals (100%) reported that they were actively involved in setting institutional priorities and convening planning meetings. They indicated that while operational staff contributed inputs, the strategic decisions on which infrastructure projects to prioritize were principally guided by their oversight. Top-down approach was reinforced by principals as Principal -3 stated: "We lead the planning sessions to ensure alignment with Vision 2030 and national priorities. Departments are consulted, but final decisions rest with the management team" while Principal 5 noted: "Our role is to set the agenda and approve the projects. We listen to suggestions from HODs and technical staff, but the board determines the final resource allocation."

Data from observation and document review confirmed that principals chaired 100% of the meetings, setting agendas, approving project schedules, and confirming alignment with institutional strategic plans. Documentation, including meeting minutes and Gantt charts, showed that all planning committees included representation from HODs and PC Coordinators, but their roles were largely advisory. For example, minutes from Institution A's FY 2022/2023 planning session indicated: "HODs provided input on workshop refurbishment, but the Board finalized timelines and budgets." Triangulating interviews, observations, and documents suggest that principals exercised strategic control over inclusivity. While all institutions reported some degree of departmental consultation, only 2 (33%) of meeting agendas explicitly listed HODs or technical staff as contributing members rather than observers. Thus, while formal structures allowed for input, the ultimate decision-making power rested firmly with principals, emphasizing strategic oversight over participatory decision-making. This indicated that principals consistently exercised strategic leadership, ensuring alignment with national and institutional priorities, while inclusivity was largely advisory rather than decision-making.



Incomplete 7 Storey tuition block of Institution A FY 2022/2023

Analysis of PC Coordinators' responses highlighted their central role in operationalizing planning inclusivity. All six PC Coordinators (100%) confirmed that they coordinated meetings involving departmental representatives and technical staff, ensuring that inputs from HODs and implementers were captured. Unlike principals, who focused on strategic oversight, PC Coordinators emphasized facilitation, documentation, and the inclusion of practical considerations in planning. PC Coordinator -6 stated: "We make sure every department submits its infrastructure needs, and we schedule planning sessions where these are reviewed. Our role is to integrate these inputs into the performance contracts," while PC Coordinator -2 noted: "Technical staff and implementers are invited to discuss resource feasibility. Without their input, plans would be unrealistic or incomplete."

Data from observation and document analysis revealed that PC Coordinators actively mediated discussions, ensuring departments had opportunities to present priorities. In Institution B's 2023/2024 planning session, for instance, PC Coordinator -3 reported: "All departments attended; inputs on laboratory refurbishment and drainage works were documented for inclusion in the PC draft." Gantt charts, project schedules, and planning minutes from all six (100%) institutions show that PC Coordinators systematically listed departmental representatives and technical staff as contributors. The documentation reflected a structured approach that is 92% of planned projects had explicit departmental input recorded, and 87% of action items from meetings were traceable to the relevant HOD or technical staff member. While principals provided strategic direction, PC Coordinators ensured participatory engagement, integrating technical feasibility and resource considerations. Nonetheless, the final decision on project prioritization still rested with the principals, indicating that inclusivity facilitated planning but did not override strategic authority. This demonstrated that PC Coordinators effectively operationalized inclusive planning, ensuring that departmental and technical perspectives informed performance contract development, while maintaining alignment with principals' strategic guidance.



Upgraded ICT Laboratory of Institution E FY 2022/2023

Though all institutions had mechanisms for involving departmental leaders in planning, the depth and quality of participation varied across contexts. Out of the 16 HODs, 13 (81%) reported being actively involved in planning discussions, particularly when departmental infrastructure projects were under consideration. However, 3 HODs (19%) indicated that their participation was more symbolic, with decisions already framed by principals and PC Coordinators before departmental input was sought. HOD 3 remarked: "We were called to present departmental needs, and these were incorporated into the performance contract draft. For example, our request for ICT lab upgrades was captured and funded." In contrast, HOD -8 noted: "Sometimes we are invited to meetings, but our proposals are sidelined in favor of projects already predetermined at the top." Data from document analysis corroborates these mixed experiences. Minutes from planning meetings in Institutions B and C explicitly list HOD contributions, with items such as "Science laboratory refurbishment" and "Workshop machinery

installation” traced directly to departmental submissions. In contrast, documentation from Institution 5 showed fewer references to departmental proposals, and HOD’s 12 request for a new hostel was absent from final PC documents, reflecting exclusion. Observations also supported this dichotomy. In Institutions A, C, and D, HODs were seen actively presenting departmental priorities and engaging in dialogue with PC Coordinators and principals. Conversely, in Institutions E and F, HODs were present but largely quiet, with limited opportunities to debate or justify proposals before finalization.



New Workshop Construction of Institution A FY 2020/2021



Prefabricated Agriculture and Environmental Tuition Rooms of Institution D FY 2022/202



Electrical Installation Workshop of Institution D FY 2022/20223



Upgraded ICT Laboratory of Institution E FY 2022/2023

It emerged that inclusivity for HODs is generally upheld but unevenly practiced. Their technical input is valued, particularly in feasibility assessments and resource allocation, but final authority lies with principals and PC Coordinators. This sometimes creates tension between perceived participation and actual influence. HODs contributed critical technical insights into planning processes, but their degree of influence fluctuated depending on institutional governance culture. While inclusivity is formally recognized, in practice it often veers towards tokenism in certain institutions.

Domain 3: Alignment with Resources and Institutional Priorities

Principals' responses highlighted a strong emphasis on strategic alignment between planned infrastructure projects and broader institutional priorities, as well as national frameworks such as Vision 2030 and the Big Four

Agenda. All six principals (100%) reported that they consistently ensured project planning referenced institutional strategic plans and budget envelopes. They emphasized that alignment was critical to both funding approval and institutional credibility. Principal -2 stated: “Every infrastructure plan we submit must reference the Strategic Development Plan and the budget guidelines. Without this, the Ministry will not approve our Performance Contract targets,” while Principal -4 added: “We prioritize projects that address both urgent departmental needs and national agenda alignment, such as ICT lab upgrades and workshops supporting technical skills.”

Data from document analysis further corroborates these assertions. Planning documents from all six institutions explicitly link proposed infrastructure projects to strategic goals and budget allocations, distinguishing between Government of Kenya funding, donor contributions, and internally generated revenue such as IGA and fees. For instance, Institution E’s 2020/2021 PC explicitly references the Government of Kenya-funded new workshop construction as a priority aligned to national technical skills enhancement programs. Planning meetings confirmed principals’ active role in ensuring resource alignment. For instance, in Institutions A, B, and D, principals cross-referenced proposed projects with both annual budgets and strategic frameworks, ensuring that high-cost or multi-year projects had funding sources clearly identified.



Administration and Tuition Block of Institution E FY 2021/2022



Stalled Perimeter wall of Institution B FY 2019/2020



Acquired land for play fields expansion of Institution D FY 2021/2022

The findings revealed that principals play a pivotal strategic role in aligning infrastructure planning with resources and institutional priorities, ensuring feasibility, compliance, and policy alignment. Quantitatively, of the 30 planned projects across the six institutions, 28 (93%) were directly aligned with strategic priorities and budget limits, indicating high effectiveness in this domain. Two projects, both internally funded hostels in Institutions E and F, experienced partial alignment due to resource constraints but were still included with mitigation strategies noted.

Performance contract Coordinators' responses revealed that operational alignment of infrastructure plans with resources and institutional priorities was generally strong but faced practical constraints. All six coordinators (100%) reported that they cross-checked project proposals against budget envelopes, funding sources, and timelines before documentation in the PCs. However, four coordinators (67%) noted occasional discrepancies between the planned timelines and actual fund availability, requiring adjustments in scheduling or project scope. PC Coordinator -5 explained: "We ensure every project has an identified funding source-GOK, fees, or donor but sometimes the funds are delayed, and we have to adjust the sequence of works" and Principal -6 stated: "alignment is mostly achieved, but we sometimes have to prioritize urgent departmental requests over strategic plans when resources are insufficient."

Data from document analysis supported these claims. For example, Institution C's 2021/2022 ICT laboratory project had full Government of Kenya funding and was aligned with national technical priorities, while Institution D's 2021/2022 playing ground project, funded by fees, faced partial implementation due to resource shortfalls. Observations from operational meetings confirmed that PC Coordinators routinely check proposed projects against available funding and institutional priorities, creating detailed Gantt charts and project schedules that incorporate contingencies for delayed funds. Quantitatively, 25 of 30 projects (83%) reviewed by PC Coordinators were executed with alignment to both strategic priorities and available resources, while 5 projects

(17%) experienced partial alignment due to funding delays or internal resource limitations. This aligns with observed implementation outcomes, where Government of Kenya-funded projects had higher completion rates (average evaluation score 82%) than internally funded projects (average evaluation score 50%). PC Coordinators were effective operational planners who translated strategic priorities into actionable infrastructure plans, though resource variability sometimes constrained perfect alignment.



Hostel of Institution C FY 2021/2022

Heads of Departments' input focused on technical verification of resource alignment and departmental prioritization within PCs. HODs 13(81%) confirmed the planned projects corresponded to actual departmental needs and institutional strategic priorities, demonstrating effective consultation during planning. For example, the upgrade of ICT labs in Institutions 1 and 3 was cited by HODs as fully aligned with departmental teaching and learning requirements. However, three HODs (19%) reported misalignment where planned projects were more administratively driven rather than reflecting pressing departmental priorities. HOD -14 noted: "The hostel renovation was prioritized at the management level, but our labs needed urgent attention. We felt some needs were overlooked" while HOD 9 commented: "Sometimes the planning reflects available funds rather than actual technical necessity, leading to delays in critical departmental projects." Data from document analysis such as departmental requisition forms and project requests, corroborates these observations. For instance, Institution D's 2021/2022 playing ground project was documented in PCs as a high-priority item, yet HOD feedback indicated that laboratory refurbishments were more urgently needed. Observations during site visits confirmed that Government of Kenya-funded projects aligned better with departmental priorities (completion rate 85–88%) compared to fee-funded projects (completion rate 40–55%), highlighting the impact of funding source on alignment. Quantitatively, HODs verified that 22 of 27 infrastructure initiatives (81%) were technically consistent with both resource availability and institutional priorities. Triangulating FGD responses, documentation, and on-site observations, HODs provide a critical technical check ensuring that operational plans translate into meaningful infrastructure delivery aligned with both departmental and institutional strategic objectives.



Stalled Basketball pitch of Institution D FY 2021/2022

Domain 4: Explicit Resource Allocation

The analysis of Principals' perspectives on explicit resource allocation revealed mixed levels of clarity and adequacy in planning for financial, human, and material resources. Principals emphasized that while Government of Kenya allocations and donor grants were often well-captured in planning documents, Internally Generated Funds and fee-based contributions were not always itemized or traceable in institutional records. Five (83%) Principals were in concurrence that Government of Kenya-funded allocations were clearly planned, traceable, and properly documented. However, when it came to fee-based contributions, only 33% found these allocations clear and well-documented. The remaining 67% either rated them as partially clear or not traceable at all. Principal -1 explicitly noted: "When funds come from Government of Kenya, they are captured in the PC with clear line items and reporting formats. But when fees are used, documentation is weak, and accountability is harder to enforce" while Principal 3 added: "Human resource allocation was assumed but not always formally documented. We had to reassign staff informally to cover supervision gaps, which was never in the original plan."

Data from review of PC documents consistently outlined financial allocations for Government of Kenya-funded projects, for instance, Institution B's library expansion FY 2020/2021 where funding lines and timelines were explicit. In contrast, fee-funded projects such as Institution E's hostel construction FY 2020/2021 lacked clear budgetary documentation. Site visit observations showed that projects with clearly allocated budgets, Government of Kenya-funded workshops, labs reached completion rates of 80–86%. Fee-funded projects, with weak documentation, were often stalled at 40–55% completion. Principals' perspectives therefore highlight a systematic gap that is, while government and donor-funded projects had explicit, traceable resource allocations, fee and IGA-funded projects often suffered from poor planning, vague allocations, and incomplete delivery. This discrepancy underscores the centrality of robust documentation and transparency in resource allocation. According to PC Coordinators, explicit resource allocation was viewed through the operational lens of documenting financial, human, and material inputs across PC periods. PC Coordinators played a pivotal role in ensuring that budget lines were traceable in institutional records, though they admitted significant gaps, especially for projects funded internally such as fees and Income Generating Activities. All PC Coordinators (100%) confirmed that Government of Kenya and donor-funded allocations were clear and traceable, with supporting documents such as procurement plans, financial requisition forms, and PC evaluation reports. In contrast, only 33% described fee-based allocations as clear, while the majority (67%) flagged them as partially

clear or untraceable. PC Coordinator -5 remarked: “Whenever the project was Government of Kenya-funded, every step was documented from requisition to completion. But when fees or IGAs were involved, sometimes the allocation was verbal or only loosely captured in minutes, which made follow-up difficult,” while PC Coordinator -1 highlighted gaps in human resource allocation: “Staff for supervision were often assumed to be available, but there was no budget line for allowances or capacity-building. This forced us to improvise.”

The findings of the study revealed that Heads of Departments viewed the question of explicit resource allocation as the most relevant in terms of departmental visibility of budgeted resources for infrastructure projects. While HODs were not directly responsible for drawing budgets, their role in validating availability of human and material resources allowed them to critically assess whether allocations were adequate, realistic, and traceable at the operational level. Five HODs (31%) indicated that financial allocations for departmental projects were clear and communicated. The majority (69%) described allocations as partial or unclear, often citing cases where departmental staff were only informed of the project but not given details on budgets. HOD -1 noted: “We see the equipment arrive or the construction start, but we rarely know how much was allocated. Sometimes, delays happen and we only find out much later that funds were not enough.” and HOD -2 added: “In workshop refurbishments, the tools and consumables were delivered, but no funds were budgeted for training staff to use them. That gap affected how quickly the facility became functional.

Data from document analysis revealed that in Institution E FY 2021/2022, the workshop refurbishment was fully Government of Kenya-funded with itemized resource allocation and was verified as complete. Conversely, Institution E’s staff housing project FY 2023/2024, funded through fees, lacked budget documentation in PC reports, which aligned with HOD testimonies that “staff were left guessing about the finances.” Observation revealed that incomplete or stalled fee-funded projects such as Institution B’s lecture hall refurbishment, 52% completion confirmed that unclear allocations trickled down into confusion at departmental levels, affecting planning for teaching spaces. HODs reinforced the PC Coordinators’ accounts that while financial allocations for Government of Kenya-funded projects were visible and traceable, departmental staff often lacked clarity on internally funded projects. This lack of transparency limited ownership and disrupted planning for technical use of new facilities.

Domain 5: Risk and Contingency Planning

For Principals risk and contingency planning was approached from a strategic governance lens, focusing on anticipating challenges such as delayed disbursement of funds, procurement bottlenecks, contractor underperformance, and resource shortages. The principals were tasked with embedding risk assessments into institutional planning while aligning mitigation measures with government and Board expectations. Two-thirds of principals (67%) indicated they had contingency plans for delayed government disbursements, often involving temporary borrowing from internal revenue streams that is fees and IGAs or phasing projects. However, risks related to contractor performance and procurement bottlenecks were less systematically addressed as only about 33% had explicit plans in these areas. Principal -1 explained: “We usually anticipate delays in government funding, so we break projects into phases. But when contractors underperform, there is very little we can do because procurement rules tie our hands,” while Principal -4 noted: “Our PCs ask us to deliver within timelines, but we are not given room for flexible procurement. The risk is always there, and we just document the delays in our reports.” Data from document analysis revealed that In Institution E, FY 2020/2021, the hostel construction project stalled at 40% due to inadequate fee revenue, confirming the lack of robust contingency planning for internally funded projects. Observation of projects like Institution D’s playing ground FY 2019/2020, which stalled at 40% completion, demonstrated that risks were identified but poorly mitigated, leaving visible, unfinished structures. Principals revealed that risk and contingency planning was more formalized for funding delays than for operational challenges like procurement and contractor inefficiencies. While risks were recognized, mitigation strategies often remained ad hoc rather than systematic, limiting the institutions’ ability to maintain project momentum.

Performance contract Coordinators reported that risk and contingency planning was framed from an operational and documentation perspective. Their role emphasized identifying risks in project execution, monitoring their impact, and recording contingency measures in institutional reports. Unlike principals, coordinators were more

specific in flagging procurement delays, contractor non-performance, and resource gaps as recurrent threats to timely project delivery. Six PC coordinators (100%) indicated that procurement bottlenecks were the most consistently documented risk with half of the PC coordinators (50%) indicating that contingency measures such as requesting procurement fast-tracking and reallocating staff temporarily were attempted. In contrast, risks tied to contractor underperformance often lacked clear mitigation, as only 33% applied specific measures, mainly through contractor substitution or re-scoping projects. PC Coordinator -6 stated: “The biggest bottleneck we face is procurement. Even when funds are available, the processes delay us, and by the time the contract is signed, the PC reporting cycle is almost over,” while PC Coordinator -1 added: “We try to document risks like funding delays or contractor failure in quarterly reports, but mitigation is not always within our control. We can only escalate to management.” Data from document analysis and observation revealed that PC reports from Institution B, FY 2022/2023 explicitly flagged a stalled lecture hall refurbishment due to procurement delays, aligning with coordinators’ claims while in Institution F, FY 2020/2021, drainage works stalled at 40% despite budget allocation, confirming that risks linked to funding and procurement bottlenecks were real but inadequately mitigated.

It was noted that PC Coordinators displayed a more detailed and operational awareness of risks than principals. They systematically documented issues, especially funding and procurement delays, but had limited authority to implement robust contingency plans. Their strategies remained reactive, dependent on higher-level approvals, underscoring the gap between documentation and actual mitigation. According to Heads of Departments risk and contingency planning was interpreted more from a technical and departmental feasibility perspective than strategic or operational levels. Their contribution centered on identifying how risks-particularly delays, stalled projects, and resource shortages-directly disrupted teaching, learning, and departmental operations. HODs were less engaged in formal risk documentation, but their insights provided critical evidence of the practical impacts of unmitigated risks. Thirteen (81%) of HODs identified delayed project delivery as a major risk, particularly affecting laboratories and workshops. Eleven (70%) of HODs flagged stalled projects, citing trainee hostels and perimeter walls as the most visible cases. Only about half (44%) of departments attempted workarounds, such as borrowing equipment, rescheduling practical sessions, or improvising teaching spaces. HOD -1 lamented: “Our workshop machinery was supposed to be upgraded in 2021, but it came almost a year late. In the meantime, we had to reduce class rotations to avoid overcrowding,” and another HOD -6 reported: “The stalled hostel project has forced us to turn some classrooms into temporary dormitories. It’s a compromise that affects both learning and accommodation.” HOD -8 emphasized resource shortages: “We flagged the need for more lab assistants, but the plan did not allocate staff. We stretch existing personnel, which compromises quality.”

Data from document analysis revealed that the PC performance table showed stalled hostel projects in Institutions D and E FY 2022/2023 with evaluation scores of 55% and 48% respectively, corroborating HOD complaints about disrupted accommodation. Observation revealed that in Institution A, FY 2022/2023, hostel renovation was stalled halfway, confirming the lived departmental impacts reported by HODs. Similarly, Institution F, FY 2022/2023 had a trainee hostel stalled at 35%, reinforcing the gap between planning intentions and practical delivery. HODs highlighted the operational fallout of risks, particularly delays and project stalls, which directly undermined teaching and trainee welfare. Their responses demonstrated that while risks were evident and widely experienced, contingency planning at the departmental level remained informal, ad hoc, and largely compensatory. Unlike principals and PC Coordinators, HODs did not formally document risks, but their accounts confirmed the practical cost of systemic planning gaps.

Domain 6: Planning Gaps or Limitations

All six principals (100%) pointed to funding gaps as the root limitation, emphasizing that Government of Kenya disbursements were irregular and institutional fees could not bridge large-scale infrastructure costs. Five principals (83%) flagged bureaucratic bottlenecks, especially around procurement and Treasury approvals, while two-thirds (67%) cited lack of technical feasibility studies, leading to projects that stalled or required redesign midway. Principal -1 stated: “We often receive targets that assume the budget was there. When funding is cut or delayed, we are forced to phase projects or leave them incomplete” while Principal -2 noted: “Procurement is a nightmare. By the time approvals are secured, timelines for the PC cycle are already gone.” Principal -3 explained: “Some targets come without feasibility checks. For example, one project was launched on unsuitable ground, and the contractor had to abandon it midway.”

Data from document analysis revealed that across institutions, PC records showed stalled projects tied to funding gaps and poor feasibility. For example, institution D's playing ground FY 2021/2022 stalled at 40% evaluation score 48% which was directly linked to feasibility oversights and inadequate funding, while Institution E's perimeter wall FY 2023/2024 stalled at 40% score 48%, corroborating principals' claims of unrealistic target setting without considering funding. Physical observation revealed that in Institution C, FY 2019/2020, a perimeter wall was stalled at 40% completion, despite being prioritized in plans. This confirmed that feasibility studies (soil stability, costing) were not adequately integrated at the planning stage.



Stalled Basketball pitch of Institution D FY 2021/2022

Principals highlighted funding shortfalls, bureaucracy, and lack of feasibility studies as the most critical planning limitations. While they attempted to strategically manage expectations through phasing or scaling down projects, the systemic constraints exceeded institutional autonomy, leaving many projects stalled or incomplete. Their insights aligned strongly with both the documentary evidence of stalled projects and field observations of incomplete infrastructure, reinforcing the centrality of planning gaps as a structural challenge. Six PC coordinators (100%) emphasized procurement and contractor delays, describing them as the “single biggest derailment” of PC infrastructure planning. Five (83%) PC coordinators flagged incomplete feasibility studies, echoing principals' concerns but from the perspective of operational planning. Four PC coordinators (67%) highlighted weak departmental communication and lack of monitoring tools, pointing to insufficient inclusion of HODs during scope adjustments. PC coordinator 1 stated: “Procurement is a black hole – once the file leaves, it disappears for months, yet PC targets are tied to annual cycles,” while PC Coordinator -2 explained: “Many projects are rushed into PCs without feasibility data; then we discover midstream that funds or materials are inadequate.” PC Coordinator -3 noted: “Departments sometimes complain they were not updated when project scopes changed, which weakens ownership.”

Data from document analysis and observation revealed that institution B's lecture hall refurbishment FY 2022/2023 stalled at 45% completion, evaluation of score 52%) was directly linked to procurement delays and contractor non-performance, as cited in PC Coordinator reports. Institution F's trainee hostel FY 2022/2023 stalled at 35% completion, an evaluation score of 45%, with PC documentation explicitly noting “contractor

abandoned site due to payment delays.” In Institution C, the hostel construction FY 2020/2021 had been stalled at 40% completion for over two years. Site visits confirmed idle equipment and incomplete structures, corroborating PC Coordinators’ concerns about feasibility and monitoring gaps. PC Coordinators underscored that process inefficiencies, procurement delays, and weak feasibility checks were at the heart of planning limitations. Their perspectives complement those of principals, but they grounded the issue in practical monitoring and execution gaps highlighting how bureaucratic and operational hurdles undercut even well-intentioned strategic planning. Their views were strongly corroborated by PC documentation of stalled projects and field observations of incomplete facilities.



Lecture Hall Refurbishment of Institution B FY 2022/2023

Twelve HODs (75%) indicated that the most prominent issue was resource shortages during implementation where projects were completed but lacked operational inputs such as consumables or maintenance budgets. Exclusion from initial planning (63%) and unrealistic timelines (69%) further weakened the usability of infrastructure once delivered. HOD -12 stated: “We were informed of a new lab only after it was already approved in the PC. Some equipment didn’t match the syllabus we teach,” while 6 noted: “The hostel renovation was rushed to meet PC deadlines, but trainees had to be displaced for months without alternatives.” HOD -9 explained: “Our role is often reactive – we are called when something has failed, not when it is being planned.” Data from document analysis revealed that institution A’s hostel renovation FY 2022/2023 stalled halfway, an evaluation score of 55% which confirmed HODs’ concerns about unrealistic timelines and exclusion, with departmental memos indicating unresolved design input from the housing unit. Institution D’s playing ground project FY 2021/2022 stalled at 40% completion, an evaluation score of 48%, with HODs reporting that feasibility and costing were “grossly underestimated.” In Institution C, the perimeter wall project FY 2019/2020 stalled at 40% completion, an evaluation score of 50%. Departmental staff observed that the site posed safety risks, reinforcing the HODs’ frustration with inadequate feasibility studies and lack of technical consultation.



Hostel of Institution C FY 2021/2022

Heads of Departments highlighted exclusion from planning, resource shortages, and unrealistic timelines as the main planning limitations. Their perspectives reveal how gaps at the strategic and operational levels cascade into technical and departmental inefficiencies, undermining the usability of completed infrastructure. Documentary reviews and field observations strongly corroborated these concerns, showing stalled, under-resourced, or technically misaligned projects across multiple institutions. Technical staff indicated that there was limited involvement in planning. Technical staff -2 reported: “Our involvement begins when the contractor is already on site. We don’t know the specifications until it is too late,” while technical staff -4 noted: “Sometimes we get caught between management and contractors – neither side tells us exactly what is expected.” Technical staff -6 noted: “There was no confusion in execution, but we had no say in the design phase.” Data from document analysis revealed that PC planning documents largely lacked role allocations beyond “responsible office,” confirming that technical staff’s functions were implied but not spelled out. At Institution C’s perimeter wall an evaluation score of 50%, stalled because staff were unclear on whether security, estates, or technical staff were responsible for quality checks, leading to lapses in site supervision. Lower-scoring projects such as institution 4’s staff housing, an evaluation score of 55% consistently corresponded with unclear delegation of responsibilities, reinforcing technical staff accounts. As indicated by technical staff, roles were clearer in execution than in planning, with over half (56%) reporting that they were brought in only after major decisions had already been made. About half (50%) experienced mismatches between planned specifications and practical execution due to limited consultation, while nearly a third (31%) faced role overlap or conflict with contractors or administrators. Triangulated evidence shows that these gaps were not isolated but structurally embedded in PC planning documents and visible in delayed or stalled projects.

Implementer noted “we sign a contract with clear deliverables, but institutional changes make us look like we failed,” while implementer 3 wondered: “we are pulled in different directions – who exactly should we listen to, the PC coordinator or the principal?” Implementer noted “Delays in approvals meant we could not mobilize resources on time,” while Implementer explained “Sometimes the specs in the tender do not match the actual site needs, and we are blamed later.” Data from document analysis such as procurement records revealed significant lags in approval stages, confirming implementers’ claims about bottlenecks. For instance, in institution 5, hostel stalled at 40% while institution D’s staff housing 55%, contractors were present but idle, awaiting site approvals, matching the narrative of role confusion and procedural delays. Performance Contract evaluation scores indicated institutions with multiple stalled projects such as in institutions, E and F whose average score ranges of 68–74% were strongly correlated with implementers’ reported frustrations.



Workshop Machinery Upgrade of Institution F FY 2021/2022

According to implementers, roles were contractually clear but institutionally muddled. While 58% reported confidence in their contractual deliverables, 42% experienced serious communication breakdowns regarding reporting lines. Procurement delays (33%) and inconsistent supervision (25%) compounded challenges, frequently leading to stalled or underperforming projects. Triangulated data from stalled works such as institutions A, D, E and F confirmed that unclear institutional planning processes directly hindered implementers' performance. With regard to adequate resource allocation, technical staff -7 from noted: "Workshop machinery was installed but without enough trainers, so it's underutilized," while technical staff -10 explained: "Funds for the hostel stopped halfway, leaving us with a shell of a building." Technical staff -9 noted: "Procurement delivered items that were not exactly what we needed, so we had to improvise," and the Technical -11, indicated: "For the ICT lab, resources were adequate and timely; we could use it as planned."

Data from document analysis such as financial reports revealed gaps between budgeted and disbursed funds, especially for hostel projects in Institutions D, E, and F which stalled at 35–55%. Site visits confirmed under-resourced projects such as Institution E's incomplete hostel that is bare structure at 40%, institution F's drainage system that was poorly staffed during implementation. High scores, that is, 82–86% were aligned with projects where resources were adequate in institutions A, B and C while low scores that ranged between 45–55% corresponded with resource-starved projects in institutions D, E and F. For technical staff, resource allocation was uneven and inconsistent. About one-third (31%) confirmed adequacy, mainly in ICT and lab-related projects. However, 38% experienced partial allocations, often in terms of missing staff capacity or incomplete supplies, while 31% faced severe shortages, leading to project stalling. Triangulation with PC performance scores, institutional records, and site visits confirms that resource adequacy was a key determinant of project success or failure.

Implementer noted "In the science lab, we got everything we needed—materials, tools, even staff were factored in" while Implementer stated "ICT lab was delayed because electrical fittings came late, though the computers were ready." Implementer explained: "Hostel construction ground to a halt when funds dried up and suppliers pulled out" and Implementer noted "Sometimes the procurement office supplies whatever is easiest, not what the technical specs require." Data from document analysis such as financial records confirmed partial disbursements, especially in Institutions D, E, and F, where hostel and staff housing projects were only 35–55% complete, while Site visits showed completed science labs and ICT labs in institutions B and I versus incomplete hostels and playgrounds in institutions D and E. Data from document analysis revealed that higher evaluation scores ranging between 82–86% were linked with adequate resourcing for example, labs and workshops, while lower scores ranges of 45–55% reflected resource shortages and therefore stalled projects. For implementers,

resource adequacy was success as only 25% reported adequacy, largely in science and the single most critical determinant of project lab-related projects. The majority (75%) described partial or inadequate allocations, with 42% highlighting severe shortages leading to stalled projects. Mismatched or late supplies were a recurring problem, undermining efficiency. Triangulation across observation, institutional records, and PC scores reinforces that implementation outcomes closely mirrored the consistency and sufficiency of resource allocation.



Inclusivity Ablution Block of Institution D FY 2023/2024



Acquired land for play fields expansion of Institution D FY 2021/2022

DISCUSSION

Effectiveness of Performance Contract planning in enhancing development of physical infrastructure technical training institutions was considered to be moderately effective that is, it established structured frameworks and ensured successful delivery of some projects, but systemic gaps in inclusivity, resourcing, and risk management reduced overall effectiveness, reflected in average PC scores of 68–78% across institutions.

The following Strengths were noted: Clear strategic frameworks guided by principals and aligned with national priorities; Government of Kenya-funded projects such as laboratories and ICT infrastructure consistently

completed on time; and, PC coordinators played a strong role in documenting and monitoring. The following weaknesses were noted: Inclusivity limited: HODs and technical staff are often excluded from early planning; risk planning was weak and mostly reactive; resource allocation was uneven, that is, reliable for Government of Kenya-funded projects but weak for fee and Income Generating Activity -funded initiatives; and, role clarity weakened progressively from senior management to ground-level implementers.

PC planning in enhancing development of physical infrastructure was found to be moderately effective, with strong top-level frameworks but persistent systemic and operational gaps in inclusivity, feasibility, resource adequacy, and risk management. The findings of this study revealed that performance contract (PC) planning has institutionalized structured approaches to infrastructure development in public technical training institutions while simultaneously exposing persistent systemic gaps. Recent studies highlight that effective PC planning in educational institutions depends on participatory approaches, clear role definitions, and structured resource allocation frameworks (Mwenda & Kimani, 2022; Rao et al., 2021). Furthermore, alignment with institutional priorities and incorporation of contingency measures significantly enhances infrastructure delivery, particularly in resource-constrained environments (OECD, 2021; Mwangi et al., 2023). By triangulating strategic oversight, operational coordination, and technical verification, this study provides a nuanced understanding of how planning processes under PCs influence physical infrastructure development in Kenyan public technical institutions.

With regard to planning processes and documentation, the study established that principals utilized structured procedures—including strategic plans, PC templates, and Gantt charts in 83% of institutions. This confirms recent evidence that structured PC planning enhances accountability, strategic alignment, and performance monitoring in Kenyan public institutions (Mwenda & Kimani, 2022; Rao et al., 2021). Strong documentation correlated with higher completion and evaluation scores (84–85%), supporting the view that clear recordkeeping improves project outcomes (Mwangi et al., 2023). Conversely, poorly documented projects, such as drainage and playground works, stalled at 40–48%, reflecting systemic inefficiencies and gaps in institutional recordkeeping. These findings demonstrate that while structured planning exists, its effectiveness varies with the quality of documentation and clarity of stakeholder roles.

Inclusivity in planning reflected both hierarchical control and consultative engagement. Principals chaired 100% of planning meetings and retained authority over prioritization, consistent with the top-down governance structures often observed in public sector PCs (Mwenda & Kimani, 2022). PC Coordinators acted as facilitators, capturing departmental perspectives, with 92% of projects showing evidence of HOD input. This aligns with recent studies highlighting coordinators as critical intermediaries bridging strategic and operational levels (Rao et al., 2021; Steccolini et al., 2020). However, 19% of HODs perceived their role as tokenistic, reflecting the ongoing challenge of limited decision-making power for middle managers in participatory frameworks. Inclusivity was strongest in institutions with collaborative governance cultures and weaker where principals dominated decision-making.

Regarding alignment with resources and priorities, PC planning demonstrated strong alignment with national policy frameworks, including Vision 2030 and the Big Four Agenda, as well as institutional strategic plans (OECD, 2021; Mwangi et al., 2023). Principals emphasized compliance, coordinators operationalized alignment through budget monitoring, and HODs validated technical feasibility, creating a multilayered system of checks and balances. Nonetheless, 19% of projects prioritized administrative over departmental needs, and funding delays occasionally disrupted alignment. These findings highlight the tension between managerial goals and operational feasibility documented in recent African TVET studies (Mwenda & Kimani, 2022; Rao et al., 2021).

In explicit resource allocation, a clear distinction emerged between government/donor-funded and internally funded projects. Government-funded initiatives were well-documented and achieved higher completion rates (80–86%), while internally funded or IGA-supported projects stalled at 40–55%, reflecting the centrality of predictable funding in infrastructure success (Pfeffer & Salancik, 2021; Mwangi et al., 2023). Lack of transparency in resource allocation undermined departmental ownership, consistent with studies emphasizing the importance of clear financial flows for operational effectiveness. Notably, omission of training and

supervision in project budgets underscores the role of human capital in sustaining infrastructure projects (OECD, 2021).

Risk management and contingency planning under PCs was uneven. While principals anticipated funding delays using phasing strategies, systematic contingency frameworks addressing procurement inefficiencies and contractor delays were weak. Coordinators documented challenges but lacked authority to mitigate them, and HODs relied on improvised coping mechanisms, such as repurposing spaces or overcrowding workshops. These findings confirm that risk awareness differs across institutional levels and remains largely reactive rather than preventive (Mwenda & Kimani, 2022; Rao et al., 2021).

With regard to planning gaps and limitations, it was noted that persistent planning gaps were linked to irregular funding, procurement bottlenecks, weak feasibility studies, and limited inclusivity. In particular, inadequate feasibility assessments resulted in partially completed projects, such as playgrounds at 40% completion, illustrating how poor technical evaluation derails even well-funded initiatives (Mwangi et al., 2023). Exclusion of HODs and technical staff led to mismatched specifications and underutilized infrastructure. These gaps reflect the “implementation deficit,” where strategic aspirations are undermined by entrenched structural and operational weaknesses (OECD, 2021). Considering triangulated insights, the study revealed that PC planning has improved strategic alignment, formalization, and accountability in infrastructure development. However, effectiveness is constrained by resource dependency, bureaucratic inefficiencies, weak feasibility studies, and partial inclusivity. Government-funded projects benefited from clearer documentation and higher success rates, while internally funded initiatives were more prone to delays and inefficiencies.

CONCLUSION

Technical Training Institutes in which performance contract planning was properly accomplished, the development of physical infrastructure units were completed on time. However, the institutions that did not undertake performance contract planning to the letter, most projects were stalled and therefore not completed as per the target setting; and therefore much was not achieved in terms of provision of physical infrastructure thereby reducing effectiveness of performance contract planning in enhancing the development of physical infrastructure in public technical training institutions. Notwithstanding, the few noted isolated cases of incomplete projects, performance contract planning was effective in enhancing development of physical infrastructure.

RECOMMENDATIONS

1. Principals of Technical Training Institutes should ensure that Performance contract planning is both resource-sensitive and inclusive.
2. The Ministry of Education should ensure that all planning processes incorporate feasibility studies and audits of available financial, technical, and human resources, thereby reducing the likelihood of ineffectiveness in projects completion.
3. Performance contracting committees in Technical Training Institutes should adhere to a “funds-first” principle, whereby projects are incorporated into plans only if funding is confirmed, and institutional frameworks guarantee structured participation of Heads of Departments, technical staff, and implementers to enhance ownership and practicality.
4. The concerned state departments of the ministries should streamline bureaucratic procedures, including procurement and approvals, and integrate risk and contingency planning to mitigate delays, contractor inefficiencies, and funding shortfalls, thereby improving institutional resilience.

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