

Collaboration: A Leadership Practice of Principals for Quality and Relevance in Training Technical and Vocational Colleges in Kenya

William Kimutai Koech^{1*} & Herbert Okinyi Dimo²

¹Department of Technology Education, Moi University, Eldoret, Kenya

²Department of Technology Education, University of Eldoret, Eldoret, Kenya

*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2026.100700672>

Received: 25 July 2026; Accepted: 30 July 2026; Published: 10 August 2026

ABSTRACT

This study examined the influence of principals' leadership practices on the quality and relevance of training in public Technical and Vocational Colleges (TVCs), with a specific focus on collaboration. As chief executive officers, principals are responsible for the day-to-day management of their institutions and are expected to provide effective leadership in implementing stakeholders' decisions and addressing institutional challenges. Technical and Vocational Education and Training (TVET) institutions, however, continue to face numerous challenges, including a lack of modern practical equipment, deteriorating tools, inadequate institutional capacity, weak industrial linkages, failure to assess trainees during industrial attachment, poor-quality training, low staff motivation, and declining enrolment. These challenges and disparities have largely been attributed to ineffective leadership approaches and practices. The study adopted a mixed-methods research design and targeted principals, heads of department (academic), heads of section (non-academic), and trainees' council representatives in the Rift Valley region of Kenya. The sample was drawn using cluster, random, stratified, and purposive sampling techniques. Quantitative data were collected using questionnaires administered to 56 respondents, while qualitative data were obtained through interviews and analysed thematically. Quantitative data were analysed descriptively using the Statistical Package for Social Sciences (SPSS), and inferential tests (Kruskal-Wallis H, Friedman, and chi-square) were subsequently applied to determine whether perceptions of collaborative leadership differed significantly across respondent groups. The descriptive findings revealed broadly positive but uneven perceptions of principals' collaborative leadership practices, and the inferential analysis confirmed that respondent groups converged in their overall assessment, differing significantly on only one item — principals' support for staff-initiated decisions. The study recommends that principals undergo further training in collaborative leadership and that performance contracts be more closely aligned with institutional strategic plans. The findings are of value to policymakers, development partners, capacity-building agencies, managers and administrators, Boards of Governors (BOG), educators, researchers, and other stakeholders seeking to strengthen leadership practices that enhance the quality and relevance of TVET training.

Keywords: Collaboration, Quality Training, Relevance of Training, Performance Contracting

INTRODUCTION

Background

The Constitution of Kenya (2010) paved the way for major changes in the TVET sector. Under the TVET Act (2013), TVET is now organised into five categories: Vocational Training Centres (VTCs), Technical and Vocational Colleges (TVCs), Teacher Training Colleges (TTCs), National Polytechnics (NPs), and Technical Universities (TUs). TVET programmes are intended to build a skilled workforce for industry and the informal sector, and TVET is a key vehicle for achieving the goals of Kenya's Vision 2030.

Leadership is about providing direction, while management is about ensuring that programmes and procedures already initiated in an institution run smoothly. Principals of TVCs are the Chief Executive Officers (CEOs) responsible for the day-to-day running and management of their institutions; they must provide the leadership needed to implement stakeholders' decisions and to solve institutional problems and challenges. A principal must therefore be equipped with both leadership and management skills appropriate for promoting and maintaining standards, quality, and relevance in education and training.

Strategic plans set out long-range goals and operationalise an institution's vision, mission, and values; however, the best plans are of little use unless implemented, and successful implementation requires linking plans to other institutional systems such as budgets and reward structures. Under the leadership and management of the principal, a TVET institution requires strategic planning that involves decisions about long-term goals and strategies. One key mandate of the Board of Governors (BOG) is to develop the institution's strategic plan, as required under the TVET Act (2013).

Principals must understand their institutions' visions clearly so that they can form a realistic picture of where they want to take the institution over the next five to ten years. They must constantly communicate the vision and mission of the TVC, pursue and reinforce values that support that vision and mission, and secure followers' commitment to implementing rational strategies. Standards, quality, and relevance in training are a central requirement of the TVET Act (2013).

Collaboration

In this study, an education–industry partnership refers to a structured collaboration between a TVC and an industrial organisation that aligns college education with real-world industry practice. Such collaboration improves teaching, learning, skills development, research, innovation, and graduate employability, while linking educational competencies to labour-market and community needs.

Quality and Relevance of Training

The quality and relevance of training in an educational institution matter because they directly determine how effectively learners acquire the knowledge, skills, attitudes, and competencies needed for real-life application. Training must be of high quality (well designed) and relevant — aligned with the needs of society, industry, and the learner.

Theoretical Framework

This study drew on two complementary theories to explain the impact of principals' leadership practices in Kenyan TVCs: visionary leadership theory (Bennis & Nanus, 1985; Kouzes & Posner, 1987; Sashkin, 1988) and transformational leadership theory (Burns, 1978; Bass, 1985). Kouzes and Posner's visionary leadership model identifies five practices common to successful leaders: challenging the process, inspiring a shared vision, enabling others to act, modelling the way, and encouraging the heart. Transformational leadership theory, in turn, emphasises symbolic leader behaviour, inspirational messaging, ideological and moral values, individualised attention, and intellectual stimulation. Both theories explain how leaders enable organisations to achieve outstanding outcomes and were considered appropriate because principals, as chief executive officers, must lead institutions with visions, missions, strategic plans, and shared values, and must motivate, inspire, and influence their staff.

In conceptualising the relationship between principals' effective leadership and quality and relevance in training, strategic implementation was treated as the independent variable with the most direct bearing on outcomes: effective leadership depends substantially on how well principals implement strategic plans.

Statement of the Problem

There is considerable interest in institutional leadership, driven by the widely held belief that the quality of leadership makes a significant difference to institutional outcomes. In Kenya, principals of TVCs are the CEOs responsible for the day-to-day running and leadership of their institutions and are expected to implement

stakeholders' decisions in ways that resolve institutional problems. Research conducted in TVET institutions points to numerous persistent challenges: a lack of practical equipment, deteriorating tools, inadequate institutional capacity, poor-quality training, low staff motivation, weak industrial linkages, failure to assess trainees, poor enrolment, inferior facilities, and graduates whose skills are poorly matched to industry needs (Republic of Kenya, 2008; Nyerere, 2009; Sang et al., 2012). Left unaddressed, these challenges will continue to undermine standards, quality, and relevance in training. Little research attention, however, has been directed specifically at the leadership practices of principals. This study addressed that gap by examining how far effective 21st-century TVET leadership depends on the principal's ability to lead through consistent strategic implementation aimed at quality and relevance of training.

Objective of the Study

To appraise how principals collaborate and work with development partners to support capacity building and thereby assure quality and relevance in training.

LITERATURE REVIEW

Collaboration

UNESCO (2025) and the World Bank (2026) emphasise that education–industry partnerships are important for linking institutional education with workplaces. In practice, such partnerships include internships, apprenticeships, work-based learning, joint research, equipment or technology support, entrepreneurship programmes, and staff or trainee exchanges. Educational institutions provide theoretical, foundational knowledge, while industry exposes trainees to real work environments where they gain practical knowledge of current tools, standards, and competencies.

Education–industry partnerships help to narrow the gap between what trainees study and what industry requires, improve trainees' practical skills and confidence, and help both institutions and industry stay current with each other's needs. In tertiary and TVET education particularly, such partnerships are an important approach to skills development, innovation, and economic growth.

Institutional networking generally benefits from the process of capacity building in thematic areas among partnering and collaborating institutions. Collaboration and networking in TVET institutions should aim to ensure the quality of education and training while enabling staff and trainees to acquire the latest skills required by industry.

Koech (1999), as cited in Onduru (2012), observed that Kenya has, in practice, an insufficient number of active collaborative mechanisms and argued for more active collaboration between industry and training institutions to strengthen the relevance of training. He emphasised the need for technical institutions to build direct linkages with the world of work — soliciting industry support through equipment donations, staff-exchange programmes, and internship placements for trainees and staff.

Nyerere (2009) similarly argued for stronger linkages between TVET institutions, the labour market, and donor organisations, including partnerships with the private sector to ease the transition from learning to work, closer work with NGOs already supporting placement programmes, development of training institutions in rural and marginalised areas, stronger sector research and documentation, and coordinated implementation of policy reforms in the informal sector to support poverty reduction.

The African Union's Agenda 2063 Framework (AU, 2015) similarly emphasised the importance of partnerships, committing member states to developing policy frameworks for partnership, implementing strategies to maximise partnership benefits, and deepening the transformational benefits of collaboration.

Nyerere (2009) further argued that TVET institutions benefit from partnering with the private sector, citing the Philippines as an example of strong university–industry innovation partnerships, and recommended that Kenyan TVET institutions pursue similar partnerships with organisations such as UNDP, curriculum-development

bodies, and industry players, as well as with government and development partners providing infrastructure, training of instructors, tools and equipment, and ICT support.

The Ministry of Youth Affairs and Sports (Republic of Kenya, 2010) identified close collaboration with UNDP, UNICEF, UNFPA, JICA, and UNESCO, all of which have continued to provide technical assistance and funding for youth life-skills and leadership development in Kenya.

Central to this study is the leadership practice of enabling others to act, identified by Kouzes and Posner (1995), who argued that leaders enable others to act by fostering collaboration and strengthening those around them. Leaders do not achieve results alone; they achieve results through others, which requires more than repeating a vision — people must feel able to act and be supported in putting their ideas into practice. As a leader, a principal must foster collaboration by promoting cooperative goals and building trust, and must strengthen others by sharing information and power and increasing their discretion and visibility. TVC principals must therefore engage development partners in genuine collaboration to build institutional capacity for quality and relevant training.

Quality and Relevance in Training

Quality and relevance in training are central requirements of the TVET Act (2013). When training is both high-quality and relevant, it bridges the gap between education and industry, produces competent, work-ready graduates, strengthens institutional standing, and supports innovation and national development — but this can only be achieved through effective leadership.

Tichy (1997) defines effective leadership as the capacity to produce the results originally intended — the ability to achieve a set objective by reaching organisational targets. Gill (2006), in an integrative, holistic model of leadership, argues that effective leadership requires vision, a sense of mission, shared values, strategy, empowerment, influence, motivation, and inspiration. Kreitner and Kinicki (1998) similarly identify vision, values, and empowerment as a new leadership paradigm, arguing that traditional command-and-control approaches to organisational behaviour have largely outlived their usefulness and that a learning organisation instead requires vision, values, and empowerment (Gill, 2006, p. 91).

TVET institutions should therefore be distinguished by visionary and inspirational leadership, clear strategic direction, a supportive institutional culture, and staff empowered to make decisions. The TVET Act (2013) gives the BOG, as the supreme governing organ of the TVC, the mandate to develop and communicate the institution's vision and mission, set strategic direction, enable staff to achieve institutional goals, and consistently recognise both collective and individual contributions.

METHODOLOGY

The study combined quantitative and qualitative approaches in a concurrent mixed-methods design. Mixing the two approaches drew on the strengths of both and allowed for data triangulation. Quantitative data were collected and analysed descriptively to characterise the frequency distribution of principals' leadership practices in relation to strategic implementation, while the qualitative data generated through interviews were analysed thematically.

Study Area

The study was carried out in the Rift Valley region across four counties, at five purposively selected TVET institutions: Emining TVC (Baringo), RVIST-TVC (Nakuru), Ollessos TVC and Kaiboi TVC (Nandi), and Rift Valley TVC (Uasin Gishu).

Target Population and Sample

The target population comprised 82 respondents across the five TVCs: principals (5), heads of department in administration and academics (42), heads of non-academic sections (30), and trainee council representatives (5). The quantitative-phase sample of 68 respondents was drawn using stratified random sampling: heads of

department (38) and heads of section (20) were sampled in equal proportion from their respective strata, alongside all five principals and five trainee council representatives. For the qualitative phase, 20 participants (5 principals, 5 heads of department, 5 heads of section, and 5 trainee council representatives) were purposively drawn from the sampled population.

Validity and Reliability

The validity of the research instruments was established through thorough scrutiny by the researcher's supervisor. Reliability was confirmed through piloting at Shambere TVC in Kakamega County, in Kenya's Western region.

Data Collection Procedures

The researcher visited each of the five TVCs twice. The first visit secured the principals' permission to conduct the study. Questionnaires were then administered to principals (5), heads of academic department (50), heads of non-academic section (25), and trainee council chairpersons (5), with two weeks allowed for completion. Response rates were: principals 4 (80%), heads of academic department 31 (62%), heads of non-academic section 16 (64%), and trainee council chairpersons 5 (100%).

During the second round of visits, interview schedules were arranged with respondents who had completed the questionnaires — principally the principals, trainee council chairpersons, and selected heads of department and section. Interviews were conducted over two weeks, comprising eight face-to-face sessions at each of the five institutions, during which the researcher gathered respondents' opinions, views, and attitudes on principals' leadership practices.

Data Analysis Procedure

Quantitative data were analysed descriptively using the Statistical Package for Social Sciences (SPSS) to generate frequencies and percentages. To determine whether perceptions of collaborative leadership differed significantly across the four respondent groups, three inferential procedures were subsequently applied to the aggregated response data: the Kruskal-Wallis H test (an item-by-item, non-parametric analogue of one-way ANOVA appropriate for ordinal Likert data and independent groups of unequal size), the Friedman test (a non-parametric repeated-measures test treating the nine collaboration items as matched blocks and the four respondent groups as the compared treatments), and a chi-square test of independence (assessing whether the overall distribution of Disagree/Neutral/Agree responses, pooled across all nine items, was associated with respondent group). Cramer's V was computed as a measure of effect size for the chi-square test. Qualitative data from the interview schedules were analysed thematically.

RESULTS AND DISCUSSION

The objective of this study was to appraise how principals collaborate and work with development partners to support capacity building and assure quality and relevance in training. To address this objective, principals, heads of department, heads of section, and trainee council representatives responded to seven statements and two summary indicators relating to collaboration. Descriptive results are presented first (Sections 4.1–4.4), followed by inferential statistics that test whether the four respondent groups differed significantly in their perceptions (Section 4.5).

Principals' Responses on Collaboration (n = 4)

No	Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)
1	Principals should seek to establish institutional collaboration/partnership for capacity building	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)	3 (75.0%)

2	Principals should develop cooperative relationships among staff internally and with staff in collaborating/partnering institutions	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)
3	Principals should treat their staff with dignity and respect	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)
4	Principals should give staff independence and choice in deciding how to do their work	0 (0.0%)	0 (0.0%)	2 (50.0%)	1 (25.0%)	1 (25.0%)
5	Principals should listen to diverse points of view	0 (0.0%)	0 (0.0%)	0 (0.0%)	3 (75.0%)	1 (25.0%)
6	Principals should support the decisions that staff make on their own	0 (0.0%)	0 (0.0%)	1 (25.0%)	0 (0.0%)	3 (75.0%)
7	People in a collaboration can grow in their job by learning new skills and developing themselves	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)
I1	Indicator: Principals foster collaboration	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (25.0%)	3 (75.0%)
I2	Indicator: Principals always strengthen others	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	2 (50.0%)

As shown in Table 1, all four principals agreed or strongly agreed that it was their responsibility to seek collaboration and partnership for capacity building, and all agreed that they should develop cooperative relationships with staff and partner institutions and treat staff with dignity and respect. Principals were more divided on giving staff independence in deciding how to do their work, with half remaining neutral. Most agreed that they should listen to diverse points of view, support staff-initiated decisions, and that collaboration allows people to grow by learning new skills. All principals reported active working collaboration or partnership with other institutions in academics, training, industrial attachment, culture, and sport. They described these partnerships as bridging gaps in training, laboratory equipment, and other facilities, generating revenue, and expanding exposure for trainees and staff, and as supporting capacity building — particularly through industrial attachment, equipment, new technology, and financial donations for infrastructure. Reported indicators included Memoranda of Understanding (MOUs), exchange visits with partner institutions, financial support from HELB, equipment donations, and established centres such as UNEVOC.

Heads of Department Responses on Collaboration (n = 31)

No	Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)
1	Principals should seek to establish institutional collaboration/partnership for capacity building	1 (3.2%)	0 (0.0%)	0 (0.0%)	7 (22.6%)	23 (74.2%)
2	Principals should develop cooperative relationships among staff internally and with staff in collaborating/partnering institutions	1 (3.2%)	0 (0.0%)	2 (6.5%)	10 (32.3%)	18 (58.1%)
3	Principals should treat their staff with dignity and respect	1 (3.2%)	0 (0.0%)	1 (3.2%)	7 (22.6%)	22 (71.0%)

4	Principals should give staff independence and choice in deciding how to do their work	3 (9.7%)	2 (6.5%)	1 (3.2%)	15 (48.4%)	10 (32.3%)
5	Principals should listen to diverse points of view	1 (3.2%)	1 (3.2%)	1 (3.2%)	11 (35.5%)	17 (54.8%)
6	Principals should support the decisions that staff make on their own	2 (6.5%)	3 (9.7%)	9 (29.0%)	9 (29.0%)	8 (25.8%)
7	People in a collaboration can grow in their job by learning new skills and developing themselves	2 (6.5%)	0 (0.0%)	1 (3.2%)	10 (32.3%)	18 (58.1%)
I1	Indicator: Principals foster collaboration	2 (6.5%)	0 (0.0%)	1 (3.2%)	13 (41.9%)	15 (48.4%)
I2	Indicator: Principals always strengthen others	2 (6.5%)	0 (0.0%)	7 (22.6%)	10 (32.3%)	12 (38.7%)

As shown in Table 2, heads of department strongly endorsed principals' responsibility to seek collaboration and partnership for capacity building (96.8% agree/strongly agree) and to develop cooperative relationships with staff and partner institutions (90.4%). They likewise strongly endorsed treating staff with dignity and respect (93.6%). Responses were more divided on staff independence in deciding how to do their work, on which a combined 16.2% disagreed or strongly disagreed, and on whether principals support decisions that staff make on their own, where 29.0% remained neutral. A large majority agreed that collaboration allows people to grow by learning new skills (90.4%), and most affirmed the two summary indicators — that principals foster collaboration (90.3%) and strengthen others (71.0%) — although the latter drew a comparatively higher neutral response (22.6%). All heads of department confirmed that their institutions were in partnership with other organisations for training, academic, sporting, and cultural purposes, citing collaborators such as the National Youth Service (NYS), county governments, the Commonwealth of Learning, the Kenya Bureau of Standards (KEBS), EDB Bank, POA, Moi Teaching and Referral Hospital (MTRH), the Pharmacy and Poisons Board, NAKAWA Institute (Uganda), institutions in China, UNEVOC, and City & Guilds. Reported indicators of these partnerships included MOUs, regular exchange visits, and attachments for students and trainers. Most heads of department felt their principals held a positive view of collaboration with development partners, although one respondent noted a dissenting principal who believed the institution could stand on its own.

Heads of Section Responses on Collaboration (n = 16)

No	Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)
1	Principals should seek to establish institutional collaboration/partnership for capacity building	0 (0.0%)	0 (0.0%)	0 (0.0%)	10 (62.5%)	6 (37.5%)
2	Principals should develop cooperative relationships among staff internally and with staff in collaborating/partnering institutions	0 (0.0%)	0 (0.0%)	0 (0.0%)	9 (56.3%)	7 (43.8%)
3	Principals should treat their staff with dignity and respect	0 (0.0%)	0 (0.0%)	0 (0.0%)	5 (31.3%)	11 (68.8%)
4	Principals should give staff independence and choice in deciding how to do their work	1 (6.3%)	3 (18.8%)	3 (18.8%)	7 (43.8%)	2 (12.5%)

5	Principals should listen to diverse points of view	0 (0.0%)	0 (0.0%)	0 (0.0%)	7 (43.8%)	9 (56.3%)
6	Principals should support the decisions that staff make on their own	0 (0.0%)	1 (6.3%)	6 (37.5%)	8 (50.0%)	1 (6.3%)
7	People in a collaboration can grow in their job by learning new skills and developing themselves	0 (0.0%)	0 (0.0%)	1 (6.3%)	9 (56.3%)	6 (37.5%)
I1	Indicator: Principals foster collaboration	0 (0.0%)	0 (0.0%)	0 (0.0%)	10 (62.5%)	5 (31.3%)
I2	Indicator: Principals always strengthen others	1 (6.3%)	0 (0.0%)	0 (0.0%)	7 (43.8%)	7 (43.8%)

As shown in Table 3, heads of section strongly endorsed principals' pursuit of collaboration and partnership for capacity building (100% agree/strongly agree), the development of cooperative staff relationships (100%), and treatment of staff with dignity and respect (100%). Views on staff independence in deciding how to work were more mixed, with 25.1% disagreeing or strongly disagreeing and a further 18.8% neutral. Support for listening to diverse points of view was unanimous. On whether principals support staff-initiated decisions, 37.5% remained neutral, and views on the indicator that principals strengthen others were similarly divided, with 43.8% neutral or disagreeing. All heads of section interviewed were aware of existing institutional collaborations in academics, training, and corporate social responsibility, reporting support in the form of equipment, infrastructure development, income from sponsored students, specialised training, learning materials, computers, and attachments for staff and trainees, with MOUs and e-learning and infrastructure indicators most frequently cited.

Trainee Council Representative Responses on Collaboration (n = 5)

No	Statement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)
1	Principals should seek to establish institutional collaboration/partnership for capacity building	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	4 (80.0%)
2	Principals should develop cooperative relationships among staff internally and with staff in collaborating/partnering institutions	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	4 (80.0%)
3	Principals should treat their staff with dignity and respect	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	4 (80.0%)
4	Principals should give staff independence and choice in deciding how to do their work	1 (20.0%)	1 (20.0%)	0 (0.0%)	1 (20.0%)	2 (40.0%)
5	Principals should listen to diverse points of view	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (20.0%)	4 (80.0%)
6	Principals should support the decisions that staff make on their own	1 (20.0%)	2 (40.0%)	2 (40.0%)	0 (0.0%)	0 (0.0%)
7	People in a collaboration can grow in their job by learning new skills and developing themselves	0 (0.0%)	0 (0.0%)	1 (20.0%)	1 (20.0%)	3 (60.0%)

I1	Indicator: Principals foster collaboration	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40.0%)	3 (60.0%)
I2	Indicator: Principals always strengthen others	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (40.0%)	3 (60.0%)

As shown in Table 4, trainee council representatives strongly endorsed principals' pursuit of collaboration for capacity building, cooperative staff relationships, treatment of staff with dignity and respect, and listening to diverse points of view (each at 100% agree/strongly agree). Views were split on staff independence in deciding how to work, and the item on principals supporting staff-initiated decisions drew no agreement at all — 80% of trainee representatives disagreed, strongly disagreed, or were neutral, the most critical response recorded across any group on any item. Most agreed that collaboration allows people to grow by learning new skills and endorsed both summary indicators. Representatives described active partnerships in academic training and sport, sponsorship arrangements with NYS and county governments, and attachment or practical-training partnerships with organisations such as Mediheal Hospital, KEPHIS, and John Deere Ltd, with MOUs and regular partner visits cited as the main indicators of these relationships.

Inferential Statistics

While the descriptive results in Sections 4.1–4.4 show that all four respondent groups viewed principals' collaborative leadership practices broadly favourably, the group-by-group tables leave open the question of whether the apparent differences in the strength of agreement — for example, the more critical ratings offered by trainee council representatives on staff-initiated decision-making — are statistically significant or simply reflect the small samples involved. Three inferential procedures were therefore applied to the pooled item-level frequency data: a Kruskal-Wallis H test for each of the nine items, a Friedman test on the composite item means, and a chi-square test of independence on the pooled response distribution.

Kruskal-Wallis H Test (item-by-item group comparison)

Because Likert-type responses are ordinal and the four respondent groups were of markedly unequal size ($n = 4, 31, 16,$ and 5), the Kruskal-Wallis H test — the non-parametric analogue of one-way ANOVA — was used to test whether the distribution of responses to each item differed significantly across principals, heads of department, heads of section, and trainee council representatives. The results are summarised in Table 5.

Item	H	df	p-value	Decision ($\alpha = .05$)
Seek institutional collaboration/partnership	6.342	3	.096	Not significant
Develop cooperative relationships	1.734	3	.629	Not significant
Treat staff with dignity and respect	0.868	3	.833	Not significant
Give staff independence in deciding how to work	2.786	3	.426	Not significant
Listen to diverse points of view	2.461	3	.482	Not significant
Support decisions staff make on their own	9.969	3	.019*	Significant
People grow by learning new skills	1.104	3	.776	Not significant
Indicator: fostering collaboration	2.290	3	.514	Not significant
Indicator: strengthening others	2.632	3	.452	Not significant

*Significant at $p < .05$.

As Table 5 shows, the four respondent groups held statistically indistinguishable views on eight of the nine collaboration items (all $p > .05$), indicating a broad consensus across principals, heads of department, heads of section, and trainees on most aspects of collaborative leadership. The single exception was the item on whether principals support the decisions that staff make on their own, which produced a statistically significant difference across groups, $H(3) = 9.97$, $p = .019$. Inspection of the group mean Likert scores (Table 6) shows that this significant difference was driven chiefly by trainee council representatives, whose mean rating ($M = 2.20$) fell below the neutral midpoint of the scale — the only sub-neutral mean recorded on any item by any group — compared with substantially higher means among principals ($M = 4.50$), heads of department ($M = 3.58$), and heads of section ($M = 3.56$). This suggests that, while staff-facing respondent groups perceive principals as reasonably supportive of autonomous decision-making, trainees do not experience this same latitude, a discrepancy consistent with the qualitative finding that empowerment practices appear to be applied unevenly below the level of the principal.

Composite Group Means and Friedman Test

Table 6 reports each group's composite mean Likert score, calculated by averaging the group's mean rating across all nine collaboration items.

Respondent group	n	Composite mean (9 items, scale 1–5)	Interpretation
Principals	4	4.44	High agreement
Heads of Department	31	4.23	High agreement
Heads of Section	16	4.21	High agreement
Trainee council reps	5	4.27	High agreement

All four groups recorded composite means above 4.0 on the five-point scale, indicating that, overall, agreement with the principle that principals should collaborate for capacity building was high across the institution. To test whether these composite differences were statistically reliable, a Friedman test was conducted, treating the nine items as matched blocks and the four respondent groups as the repeated-measures factor. The test was not statistically significant, $\chi^2(3) = 7.00$, $p = .072$, although the result approached the conventional .05 threshold. This indicates that, notwithstanding the item-level difference identified in Section 4.5.1, the four stakeholder groups did not differ significantly in their overall composite assessment of principals' collaborative leadership practices, though the marginal p -value suggests the difference is worth monitoring in future, larger-sample research.

Chi-Square Test of Independence (pooled response category by group)

Finally, to test whether the overall pattern of agreement, neutrality, and disagreement was independent of respondent group, individual response categories were collapsed into three levels (Disagree = Strongly Disagree + Disagree; Neutral; Agree = Agree + Strongly Agree) and pooled across all nine items for each group. The resulting 4×3 contingency table is shown in Table 7.

Respondent group	Disagree F (%)	Neutral F (%)	Agree F (%)	Row Total
Principals	0 (0.0%)	3 (8.3%)	33 (91.7%)	36
HODs	21 (7.5%)	23 (8.2%)	235 (84.3%)	279
HOS	6 (4.3%)	10 (7.1%)	126 (88.6%)	142
Trainee reps	5 (11.1%)	3 (6.7%)	37 (82.2%)	45
Total	32 (6.4%)	39 (7.8%)	431 (85.9%)	502

A chi-square test of independence found no statistically significant association between respondent group and response category, $\chi^2(6, N = 502) = 6.19, p = .403$, Cramer's $V = .078$, indicating a negligible effect size. This confirms, at the level of the full pooled dataset, that principals, heads of department, heads of section, and trainee council representatives responded to the collaboration items in broadly similar proportions, reinforcing the Friedman test result in Section 4.5.2 and suggesting that, at the institutional level, perceptions of principals' collaborative leadership are shared relatively consistently across staff and trainee stakeholder groups, with the single, item-specific exception of staff-initiated decision-making identified above.

Summary of Inferential Findings

Taken together, the inferential analysis supports and sharpens the descriptive findings: it confirms that respondent groups converge closely in their overall assessment of principals' collaborative leadership (non-significant Friedman and chi-square results), while also isolating one specific, statistically significant point of divergence — trainee council representatives' comparatively low rating of principals' support for staff-initiated decisions. This distinction matters for practice: institution-wide collaboration initiatives (MOUs, industrial attachments, equipment donations) appear to be well recognised and consistently valued by all stakeholder groups, but principals' day-to-day empowerment practices with trainees specifically may warrant more deliberate attention than the aggregate figures alone would suggest.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study sought to appraise how principals collaborate and work with development partners to support capacity building and enhance the quality and relevance of training in Technical and Vocational Colleges. It drew on principals, heads of department, heads of section, and trainee council representatives from five public TVCs in Kenya's Rift Valley region.

The findings show that TVCs are actively engaged in collaboration and partnership with other institutions and development partners across academics, training, industrial attachment, culture, sport, staff development, and infrastructure support, and that these collaborations have contributed positively to capacity building, the acquisition of modern skills and technology, improved training facilities, and enhanced quality and relevance of training. The inferential analysis further confirms that this positive assessment is shared consistently across all four stakeholder groups, with one notable exception: trainee council representatives rated principals' support for staff-initiated decision-making significantly lower than did the other groups, pointing to a specific gap between institutional-level collaboration and individual-level empowerment of trainees. Collaborative leadership practices among principals therefore play an important role in strengthening institutional performance and promoting quality training, but existing partnerships and collaborative frameworks still require strengthening — and more consistent application to trainees specifically — to maximise their effectiveness and sustainability.

Recommendations

Arising from these findings, principals should strengthen institutional collaboration and partnership with industries, development partners, and other educational institutions to enhance capacity building and improve the quality and relevance of training in TVCs. All such collaborations and partnerships should be formally structured through clear policies, Memoranda of Understanding (MOUs), and legal frameworks that guide their implementation and sustainability, and where collaborations involve research, innovation, and development, appropriate legal structures should be put in place to safeguard intellectual property rights, particularly regarding the patenting and ownership of innovations. Principals should also extend collaborative and empowerment practices more deliberately to trainees, given the significant gap identified in this study between staff and trainee perceptions of support for autonomous decision-making, and should undergo continuous training in collaborative leadership practices, partnership management, and strategic implementation to enhance institutional effectiveness, with performance contracts more closely aligned with institutional strategic plans. Finally, because the principal ($n = 4$) and trainee-representative ($n = 5$) samples in this study were small, future research should

replicate this analysis with a larger, multi-region sample to confirm whether the item-level difference in perceived support for staff-initiated decisions holds beyond the Rift Valley region.

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