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Teaching and Learning Resources as Drivers of Hospitality TVET Enrolment in Ghana's Colleges of Education: Empirical Evidence from a Mixed-Method Survey

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ABSTRACT

This paper examines how teaching and learning resources drive hospitality TVET enrolment decisions among students in Ghana's Colleges of Education. Using an embedded mixed-methods design, quantitative data were collected from 336 hospitality students, while qualitative interviews were conducted with 10 Heads of Department to contextualise and explain the survey results. The teaching and learning resources construct was validated through principal component analysis, yielding three dimensions: (i) institutional support and resource provision, (ii) learning environment and pedagogical practices, and (iii) access to knowledge and expertise. Pearson correlations showed that all three dimensions were positively associated with student enrolment. Multiple regression indicated that teaching and learning resources explained 44.4% of the variance in enrolment ($R^2 = 0.444$), with learning environment and pedagogical practices emerging as the strongest predictor ($\beta = 0.369$, $p < .001$). Qualitative findings highlighted resource constraints, weak support systems, and policy/institutional barriers as key mechanisms shaping students' enrolment experiences. The paper discusses implications for strengthening resource allocation, pedagogy, and industry-linked learning opportunities to sustain hospitality TVET enrolment.

INTRODUCTION

TVET (Technical and Vocational Education and Training) has, for a long time, helped connect schooling to real jobs by giving learners skills that employers need (United Nations Educational, Scientific and Cultural Organisation [UNESCO], 2021). After World War II, the UNESCO and the International Labour Organisation (ILO) encouraged TVET as a way to grow economies and reduce poverty, especially in places trying to create more jobs and rebuild productivity (Subrahmanyam, 2020; UNESCO, 2021). As education started to focus more on learning throughout life, TVET was seen as an important part of building a skilled population that can keep up with changing work needs (UNESCO, 2021). In Africa, TVET is often viewed as a practical route to employment and a way for young people to improve their lives financially, which can help reduce unemployment and inequality (Subrahmanyam, 2020). However, many countries, including Ghana, still have low TVET enrolment, which limits these benefits (Adams, 2024).

The number of students joining TVET programmes is closely linked to how they choose careers and courses. Career choice shapes a learner's future (Siddiky & Akter, 2021) and is influenced by personal reasons, family and community influence, and the situation around the learner (Fantinelli *et al.*, 2023). In hospitality and tourism programmes, students often consider job chances and expected income (Barreto & Mayya, 2024), as well as family influence and where they live (Sayed & Abdelaal, 2021). Research also shows that social expectations, family pressure, job prospects, personal interest, and the school's reputation all affect whether learners choose

TVET (Siddiky & Akter, 2021). For hospitality TVET in particular, teaching and learning resources matter a lot because hospitality training is hands-on and needs proper practice spaces, tools, and materials (Adams *et al.*, 2024; Hanaysha *et al.*, 2023). When classrooms, laboratories, and workshops lack equipment, and when learning materials are limited, students may see the programme as less useful and less trustworthy, which can reduce enrolment and even make it harder for students to finish (Hanaysha *et al.*, 2023). This problem becomes worse when institutions have little funding, poor facilities, and outdated equipment, making it difficult to offer strong vocational training and attracting fewer students (Hanaysha *et al.*, 2023; Adams, 2024).

Course content and how the programme is designed also affect enrolment. Students want programmes that are practical, flexible, and connected to what employers expect; if the curriculum is old or not linked to workplace needs, learners may avoid enrolling because they doubt it will help them get jobs (Bukari *et al.*, 2023). Low enrolment is also driven by negative public views that treat vocational education as a "second choice," especially for learners who are seen as not fitting the academic route, so students seeking higher social status may avoid TVET (Adams, 2024). Parents may push learners toward academic education because of cultural beliefs and social position (Liu *et al.*, 2024), while friends can strengthen stigma when TVET is seen as a last option (Siddiky & Akter, 2021; Adams, 2024). Gender expectations also shape who joins TVET. Some communities label certain courses as "for men" or "for women," which can discourage girls from technical courses and also discourage boys from

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courses that society labels as feminine (Galizzi *et al.*, 2024; OECD, 2025). In many places, girls may face family and community resistance when they want to join vocational programmes, which keeps gender imbalance in TVET (Yousafzai *et al.*, 2025). Even though there are efforts to promote fairness, changing deep cultural beliefs and ensuring equal access across fields remains difficult (Chua *et al.*, 2023; OECD, 2025a).

Even with strong global support for TVET because of its role in skills training, employment, and income creation, Ghana's TVET sector still faces challenges that stop it from reaching its full potential (Adams, 2024; Subrahmanyam, 2020). One major concern is the continued drop in enrolment in TVET programmes in Ghanaian education colleges, partly caused by negative public attitudes that reduce the value people attach to vocational education (Adams, 2024). The effects go beyond schools: when enrolment is low, the country may end up with too few skilled workers, which can slow economic development (Subrahmanyam, 2020). Although past studies have looked at factors influencing TVET enrolment, gaps remain. Many studies rely too much on student questionnaires, pay little attention to how data collection tools affect quality, and include too few stakeholders who influence enrolment decisions (Tamang, 2022). In addition, broader problems such as limited funding, weak facilities, and lack of training materials make programmes less attractive and weaken the practical training students need for work (Hanaysha *et al.*, 2023; Subrahmanyam, 2020). Teacher quality and connection to industry also matter: when institutions cannot attract or support qualified vocational teachers, programme quality can drop, reducing enrolment and increasing dropout (Bhurtel & Bhattacharai, 2023; Dela Cruz *et al.*, 2026). Parents and peers also shape choices alongside money-related expectations, especially where TVET is viewed negatively and where the benefits of vocational qualifications are unclear (Hojeij & Al Marzouqi, 2023; Adams, 2024). If the curriculum does not match industry needs, students may be even less willing to enrol (Aljohani *et al.*, 2022). Government efforts to improve TVET through better facilities, stronger teacher training, and closer links with industry show why it is important to understand what truly drives enrolment (Adams, 2024). Strategies that promote gender inclusion and support disadvantaged learners are also recommended to reduce social, cultural, and economic barriers to TVET enrolment (Yousafzai *et al.*, 2024).

Based on these issues, this manuscript examines how teaching and learning resources influence students' decisions to join hospitality TVET programmes. By focusing on things like training facilities, learning materials, teacher capacity, and practical teaching, while recognising the wider influence of public attitudes, curriculum relevance, and stakeholder support, the study helps explain how resource conditions can make hospitality TVET programmes more or less attractive to learners in Ghana.

LITERATURE REVIEW

Theoretical framing

Resource Dependency Theory (RDT) explains how institutions depend on critical resources and how resource acquisition and deployment shape performance and attractiveness (Dill, 1981). In hospitality TVET, tangible learning resources and practice-oriented facilities can signal programme quality and readiness for industry needs, thereby supporting enrolment decisions. Social Cognitive Career Theory (SCCT) emphasises how contextual supports shape self-efficacy and outcome expectations, influencing academic and career-related choices (Bandura, 1986; Lent *et al.*, 1994). Similarly, the Theory of Planned Behaviour (TPB) argues that attitudes, subjective norms, and perceived behavioural control predict intentions and subsequent behaviour (Ajzen, 2005; Ajzen & Fishbein, 1975). Applied to hospitality TVET, supportive learning environments, access to expertise, and observable opportunities for practical competence can strengthen perceived control and favourable attitudes, making enrolment more likely. Empirical evidence shows that teaching and learning resources include good teaching skills, effective teaching methods, well-equipped classrooms, technology, student support services, and opportunities to learn through real industry connections. These resources are often linked to how happy students feel with a programme, how involved they are, and whether they stay committed to it. These experiences can influence whether students join a programme, continue with it, and recommend it to others (Abu Bakar & Quah, 2023; Hanaysha *et al.*, 2023; Latip *et al.*, 2022; Wong & Chapman, 2023; Saro *et al.*, 2023). Research shows that when lecturers teach well by setting clear goals, giving helpful notes, using learning activities, and providing feedback, students are more likely to be satisfied (Abu Bakar & Quah, 2023). Knowledgeable lecturers, who have industry experience and are motivated, also help students feel more satisfied and more willing to remain loyal to the programme (Latip *et al.*, 2022). Good interaction between students and lecturers also improves satisfaction because students value teachers who are approachable and supportive (Wong & Chapman, 2023). At the same time, learning resources such as technology and facilities are linked to better student participation and performance, and they also improve how students rate the overall quality of the institution (Hanaysha *et al.*, 2023; Amoako *et al.*, 2023; Mendoza-Villafaina & López-Mosquera, 2024). However, the benefits of good facilities may depend on whether the learning environment is supportive. Where this has been studied, the learning environment often explains how facilities lead to better results (Jayswal & Mishra, 2025).

Support from the institution also makes a difference. Academic and administrative services affect how students judge the quality of services and how satisfied they feel (Amoako *et al.*, 2023). New students adjust better when they receive support such as guidance and help with coping and managing their time, which can help them stay in the

programme (Lan *et al.*, 2024). In hospitality education, students are also more attracted to programmes that offer expert training and exposure to the industry. Experienced lecturers and strong links with industry can increase motivation (Latip *et al.*, 2020; Sihombing *et al.*, 2025), and training tools like virtual simulations or online practical labs can help students learn skills, build confidence, and stay involved (Mehra *et al.*, 2025; Distor *et al.*, 2022).

In general, studies suggest that good teaching, adequate facilities and technology, and supportive learning settings help students enjoy the programme more and stay involved. These factors often come before decisions to enrol, continue, and recommend a programme. However, many studies are only quantitative and measure satisfaction or involvement instead of directly measuring enrolment behaviours (Hanaysha *et al.*, 2023; Wong & Chapman, 2023; Jayswal & Mishra, 2025). This shows the need for studies that clearly connect teaching and learning resources to students' decisions to join and stay in hospitality TVET programmes.

MATERIALS AND METHODS

Research design

An embedded mixed-methods design was adopted, where a cross-sectional survey provided the primary quantitative evidence and qualitative interviews were embedded to explain statistical patterns (Creswell & Plano Clark, 2018; Creswell & Creswell, 2017).

Population, sampling, and participants

The quantitative population comprised hospitality students enrolled in Colleges of Education offering hospitality-related TVET programmes. A reconnaissance count indicated 1,627 students. A multi-stage sampling approach was applied (Saunders *et al.*, 2019): colleges were selected based on programme availability; students were stratified by year of study; and proportionate simple random sampling was used. Sample size was determined using Yamane's formula, yielding 336 student respondents (Yamane, 1967). For the qualitative strand, purposive sampling selected 10 Heads of Department (HoDs) with substantial experience in hospitality education and departmental recruitment/mentoring roles (Patton, 2014).

Data collection procedures

Student data were collected using a structured self-administered questionnaire distributed in class sessions through a drop-and-pick procedure, supplemented where feasible by an online version (Babbie, 2020). Qualitative data were collected through semi-structured interviews

(30–45 minutes) conducted face-to-face or via online platforms, recorded with permission and transcribed for analysis (Patton, 2014).

Measures and instrument quality

Teaching and learning resources were measured with 20 Likert-type items (1 = Strongly Disagree to 5 = Strongly Agree) covering learning materials and facilities, institutional support structures, and access to expertise/technology. A pretest was conducted before the main survey, and internal consistency reliability was assessed using Cronbach's alpha; values met recommended thresholds for scale adequacy (Nunnally & Bernstein, 1995).

Data analysis

Quantitative analysis was conducted in SPSS (v.30). Descriptive statistics summarised responses. Principal Component Analysis (PCA) with Varimax rotation was used for construct validation, with sampling adequacy assessed using KMO and Bartlett's test (Field, 2018; Kaiser, 1974). Pearson correlations tested associations, and multiple regression estimated the predictive effect of resource dimensions on enrolment (Aiken *et al.*, 1991; Field, 2018). Qualitative data were analysed thematically following an iterative coding process and integrated at the interpretation stage to explain quantitative findings (Creswell & Creswell, 2017).

RESULTS AND DISCUSSIONS

Table 1 synthesises the demographic profiles of the respondents. As shown, the respondents were predominantly female (80.4%). In comparison, male students formed 19.6%, indicating a strong gender imbalance in hospitality enrolment that aligns with the common view of hospitality as a female-dominated field (Santos *et al.*, 2025). In terms of age, the largest share of students was 20–24 years (50.9%), followed by those below 20 years (35.4%); smaller proportions were 25–29 years (11.3%) and 30 years and above (2.4%), showing that most participants were under 25 years (86.3%), suggesting hospitality programmes mainly attract younger entrants, with limited participation from mature learners. Regarding year of study, most respondents were in the second year (37.8%) and third year (31.8%). However, first-year (15.5%) and fourth-year (14.9%) students formed smaller proportions, meaning the sample was largely drawn from students in the middle years of study (69.6%), who are likely to have sufficient exposure to the programme to provide informed responses.

Table 1: Demographic Profiles of Respondents

Demographic variable	Category	n	%
Gender	Female	270	80.4
	Male	66	19.6
Age group	Below 20 years	119	35.4

	20–24 years	171	50.9
	25–29 years	38	11.3
	30 years and above	8	2.4
Year of study	First year	52	15.5
	Second year	127	37.8
	Third year	107	31.8
	Fourth year	50	14.9

Note. $N = 336$

Descriptive results: teaching and learning resources Strongly Disagree to 5 = Strongly Agree). Overall, Students' perceptions of teaching and learning resources were measured using 20 items on a 5-point scale (1 = responses were positive, with most mean scores above the midpoint of 3.00 (Table 2).

Table 2: Descriptive statistics for teaching and learning resources indicators.

Manifest Variable	Mean	SD
The institution organises industry visits and guest lectures for real-world exposure.	3.94	0.839
Classrooms and learning spaces are conducive to focused and effective learning.	3.88	0.869
The teaching methods used encourage active participation and understanding.	3.88	0.814
There are opportunities for practical, hands-on learning experiences in my courses.	3.86	0.874
The availability of teaching and learning resources influenced my decision to enrol in this program.	3.85	0.901
The institution facilitates networking opportunities with industry professionals.	3.82	0.930
The institution conducts workshops and seminars to enhance practical skills.	3.82	0.884
Laboratories and workshops have modern equipment for practical learning.	3.80	0.852
The institution encourages students to participate in research projects and internships.	3.80	0.935
The institution offers career counselling services to help plan future pathways.	3.79	0.901
The institution offers support for extracurricular activities related to my field of study.	3.79	0.924
The library resources are relevant and helpful for my studies.	3.70	0.981
The availability of textbooks and learning materials in my courses is sufficient.	3.70	0.902
The institution offers tutoring and additional support for challenging subjects.	3.70	0.964
The institution provides opportunities for collaborative learning with peers.	3.69	0.953
The institution provides access to up-to-date software and technology tools.	3.68	0.986
The institution provides access to a wide range of online academic journals.	3.59	1.094
The institution provides sufficient support for students with diverse learning needs.	3.57	1.093
Access to online resources and educational technologies enhances my learning.	3.48	1.093
Instructors in my program are knowledgeable and have expertise in their field.	3.31	1.140

Note. N (Listwise) = 336. Scale: 1 = Strongly Disagree – 5 = Strongly Agree. SD – Standard Deviation

The highest-rated areas were industry exposure and practical learning, especially industry visits and guest lectures ($M = 3.94$, $SD = 0.839$), conducive learning spaces ($M = 3.88$, $SD = 0.869$), and teaching methods that encourage participation and understanding ($M = 3.88$, $SD = 0.814$). Students also rated hands-on learning ($M = 3.86$, $SD = 0.874$) and the influence of resource availability on their enrolment decision ($M = 3.85$, $SD = 0.901$) highly. However, comparatively lower ratings were reported for digital learning resources and inclusive support, including access to online learning technologies

($M = 3.48$, $SD = 1.093$) and support for diverse learning needs ($M = 3.57$, $SD = 1.093$). The lowest-rated item was perceived instructor expertise ($M = 3.31$, $SD = 1.140$), suggesting a need to strengthen staff capacity alongside improvements in digital and inclusive support.

Construct validation: factor structure

Suitability tests in Table 3 supported factor analysis ($KMO = 0.919$; Bartlett's test $p < .001$), indicating that the correlation matrix was appropriate for extraction (Field, 2018; Kaiser, 1974).

Table 3: KMO and Bartlett's test for the teaching and learning resources scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.908
Bartlett's Test of Sphericity	Approx. Chi-Square	2719.639***
	df	190
	Sig.	<.001

Note. Levels of Significance: * $p < .05$. ** $p < .01$. *** $p < .001$

The PCA retained three interpretable factors: (i) Practices (accounting for 15.4%), and (iii) Access to Institutional Support & Resource Provision (accounting for 23.01%), (ii) Learning Environment & Pedagogical Knowledge & Expertise (accounting for 14.8%) (Table 4).

Table 4: Rotated factor loadings for teaching and learning resources

Extracted Factor	Component		
	1	2	3
Factor 1: Institutional Support and Resource Provision			
The institution offers support for extracurricular activities related to my field of study.	0.714	-	-
The institution conducts workshops and seminars to enhance practical skills.	0.702	-	-
The availability of textbooks and learning materials in my courses is sufficient.	0.683	-	-
The institution offers career counselling services to help plan future pathways.	0.661	-	-
The institution provides opportunities for collaborative learning with peers.	0.634	-	-
The institution offers tutoring and additional support for challenging subjects.	0.628	-	-
The institution encourages students to participate in research projects and internships.	0.594	-	-
The availability of teaching and learning resources influenced my decision to enrol in this program.	0.590	-	-
The institution facilitates networking opportunities with industry professionals.	0.546	-	-
The library resources are relevant and helpful for my studies.	0.530	-	-
Factor 2: Learning Environment and Pedagogical Practices			
Classrooms and learning spaces are conducive to focused and effective learning.	-	0.723	-
There are opportunities for practical, hands-on learning experiences in my courses.	-	0.699	-
Laboratories and workshops have modern equipment for practical learning.	-	0.632	-
The teaching methods used encourage active participation and understanding.	-	0.628	-
The institution organises industry visits and guest lectures for real-world exposure.	-	0.578	-
Factor 3: Access to Knowledge and Expertise			
Access to online resources and educational technologies enhances my learning.	-	-	0.810
Instructors in my program are knowledgeable and experts in their fields.	-	-	0.787
The institution provides sufficient support for students with diverse learning needs.	-	-	0.769
The institution provides access to a wide range of online academic journals.	-	-	0.704
The institution provides access to up-to-date software and technology tools.	-	-	0.615

Note. Extraction Method: PCA. Rotation Method: Varimax with Kaiser Normalisation.

Correlation and regression results

Correlation results in Table 5 show all three resource dimensions were positively correlated with student enrolment: institutional support and resource provision (r

= 0.583, $p < .01$), learning environment and pedagogical practices ($r = 0.610$, $p < .01$), and access to knowledge and expertise ($r = 0.378$, $p < .01$).

Table 5: Correlations between teaching and learning resources dimensions and student enrolment

Resource dimension	Correlation with enrolment (r)
Institutional support & resource provision	0.583**

Learning environment & pedagogical practices	0.610**
Access to knowledge & expertise	0.378**

Multiple regression showed that teaching and learning resources explained 44.4% of the variance in enrolment ($R^2 = 0.444$; Adjusted $R^2 = 0.439$). Learning environment and pedagogical practices was the strongest predictor (β

$= 0.369$), followed by institutional support and resource provision ($\beta = 0.267$), and access to knowledge and expertise ($\beta = 0.170$), all significant at $p < .001$ (Table 6).

Table 6: Regression slopes predicting student enrolment from teaching and learning resources dimensions

Predictor	B	Std. Error	β	Sig.
(Constant)	0.873	0.233	-	< .001
Institutional support & resource provision	0.292	0.056	0.267	< .001
Learning environment & pedagogical practices	0.403	0.061	0.369	< .001
Access to knowledge & expertise	0.155	0.039	0.170	< .001

Note. $R^2 = 0.444$, Adjusted $R^2 = 0.439$

Qualitative themes and integration

Interviews with Heads of Department (HoD) produced three connected themes explaining how teaching and learning resource conditions shape hospitality TVET enrolment and persistence: (1) financial and resource constraints, (2) lack of structured support systems, and (3) institutional and policy barriers.

Theme 1: Financial and resource constraints. Tutors consistently reported that the cost of hospitality training limits enrolment and contributes to dropout, especially because practical sessions require specialised equipment and learning materials. As one HoD observed, “It was expensive for students to continue because, even when they selected hospitality, the colleges sometimes did not assign them the course, citing high costs” (HoD#3). Another tutor reinforced this by noting that “Hospitality programs were generally more costly than other courses” (HoD#5). These accounts indicate that cost pressures can restrict access for learners from low-income backgrounds and weaken retention unless institutions and stakeholders introduce targeted support (e.g., subsidies, bursaries, or provision of key resources).

Theme 2: Lack of structured support systems. Tutors emphasised that weak guidance and limited support reduce commitment to hospitality programmes and increase switching or dropout. One HoD highlighted that retention can improve when students receive ongoing guidance: “It is possible to encourage students to stay in hospitality if they are consistently provided with career counselling” (HoD#1). Another stressed the importance of support before enrolment, arguing that “Experts’ career education, including well-structured counselling on TVET Programmes, should be offered to students before enrolment” (HoD#4). Similarly, another tutor noted, “Students should be provided with career guidance before joining colleges to help them make informed career choices on which courses to enrol” (HoD#6). Financial support was also viewed as part of the support system needed to sustain persistence: “Financial support

should be given to interested students so they do not drop out mid-way through the course” (HoD#8). Overall, the findings suggest that inadequate counselling and limited support leave students underprepared for programme requirements and career pathways, which then undermines enrolment stability.

Theme 3: Institutional and policy barriers. Tutors reported that institutional practices and policy priorities can override student preferences and restrict entry into hospitality programmes. One HoD explained that students may select hospitality but be redirected due to government priorities: “Students often selected home economics or hospitality, but the colleges did not allow them because the government policy focused more on training many primary education teachers. So, potential hospitality students were forced to join education programmes” (HoD#3). Another HoD called for more flexible admissions, stating that “There should be open application and admission for hospitality programmes so more students could be admitted, rather than being forced into unrelated courses” (HoD#2). These results show that policy-driven allocation and institutional admission constraints can reduce hospitality enrolment even when student interest is present, creating a gap between learner choice and programme access.

Bringing together the student survey results and the tutor interviews gave a clearer understanding of how teaching and learning resources affect enrolment in hospitality TVET. From the survey, the results grouped resources into three main areas: support provided by the institution and the resources it supplies, the learning setting and how teaching is done, and students’ access to knowledge and expert support. From the interviews, tutors pointed to three linked problems that affect enrolment and whether students stay in the programme: high costs and limited resources, weak support systems, and rules and decisions at the institutional or policy level that restrict student choices.

Looking at both sets of results together shows one clear

point: enrolment depends not only on whether resources exist, but also on whether students can actually afford to use them and get enough support to benefit from them. In the survey, students generally rated workshops, counselling, and learning materials positively, showing that these services help students feel encouraged to enrol. However, tutors explained that hospitality training is expensive, and some students fail to continue or are even moved away from hospitality because of the costs and the lack of consistent support. This suggests that even when support is available, its value is reduced if students cannot afford the programme or do not receive steady guidance. The survey also showed that students value good teaching and learning experiences, especially teaching that involves participation and practical learning. But tutors added that good teaching works best when it is supported by reliable counselling, mentoring, and follow-up. Without proper guidance, some students may join the programme without fully understanding what it requires or what career opportunities it leads to. This can lead to students changing programmes or dropping out, even when teaching in class is good.

Finally, the survey showed that access to knowledgeable instructors, digital tools, and online learning resources is important in shaping students' decisions to enrol. However, tutors explained that the high cost of specialised materials and equipment, along with certain admission rules and programme placement decisions, can prevent students from accessing these resources in practice. In other words, resources may exist, but many students may not be able to use them. Overall, the combined results suggest that improving hospitality enrolment requires not only improving the quality of resources, but also making sure students can afford them, receive strong support, and are not blocked by restrictive institutional or policy decisions.

Discussion

The results show that teaching and learning resources strongly influence student enrolment in hospitality TVET colleges in Ghana. The three identified resource factors explained 44.4% of the differences in enrolment ($R^2 = 0.444$). The strongest influence came from the learning environment and how teaching is done ($\beta = 0.369$, $p < .001$). This was followed by institutional support and availability of resources ($\beta = 0.267$, $p < .001$) and then access to knowledge and expertise ($\beta = 0.170$, $p < .001$). In simple terms, students were most likely to enrol when they experienced supportive learning spaces and effective teaching, when the institution provided useful services and materials, and when they could access skilled lecturers and professional exposure.

These findings match previous research showing that students are more willing to join and remain in programmes when teaching is strong and learning conditions are supportive. Studies report that lecturer ability, good teaching methods, and positive classroom interaction improve student satisfaction and loyalty).

Other scholarly work also shows that supportive services, good administration, access to ICT, and a positive learning atmosphere encourage students to enrol and stay (Amoako *et al.*, 2023; Hanaysha *et al.*, 2023). Similarly, students' overall learning experiences and the quality of facilities have been linked with satisfaction and continued participation (Mendoza-Villafaina & López-Mosquera, 2024). In hospitality and tourism education, well-designed programmes, qualified staff, and strong links with industry have also been found to make programmes more attractive to students (Sihombing *et al.*, 2025). This supports the pattern in this study, where effective teaching and practical learning opportunities stood out as key drivers of enrolment.

The strong role of teaching and the learning environment suggests that students value teaching that is engaging, practical, and supportive, especially in hospitality programmes where students expect to gain hands-on skills for work. Institutional support and resource availability also mattered because access to tools, materials, and helpful services can make students feel supported and confident that they will succeed. Although access to knowledge and expertise had the smallest effect, it remained significant. When students can learn from capable lecturers and connect with industry professionals, they are more likely to believe the programme is credible and that it will lead to real opportunities.

These results also fit the study's guiding theories. Resource Dependency Theory explains that institutions that can secure and manage key resources are more attractive and more likely to survive over time (Dill, 1981). Social Cognitive Career Theory suggests that supportive learning conditions and resources strengthen students' confidence in their ability to succeed and shape their expectations about the value of the programme (Lent *et al.*, 1994). The Theory of Planned Behaviour further helps explain why resources matter; when students feel that resources and support are available, they feel more in control of their decision and are more likely to follow through with enrolling (Ajzen, 2005). Together, these ideas help explain why teaching quality, learning support, and access to resources influence enrolment decisions.

Overall, the study adds evidence from Ghana showing that teaching and learning resources explain a large share of enrolment patterns in hospitality TVET. It also shows that resources and teaching support are not only important for keeping students in a programme, but they also help attract students in the first place. This has clear practical importance for colleges and policymakers who want to strengthen hospitality TVET enrolment through better teaching, improved learning conditions, and stronger support systems.

CONCLUSIONS

Teaching and learning resources significantly influence hospitality TVET enrolment in Ghana's Colleges of Education, explaining a substantial portion of enrolment variance. Policy and management actions should prioritise

(i) visible practical resources (modern workshops/labs, structured practical sessions, industry visits, guest lectures), (ii) student support systems (career counselling, mentoring, tutoring), and (iii) improved access to digital and knowledge resources alongside instructor professional development. Streamlining procurement and strengthening accountability mechanisms can reduce delays in resource improvements.

The study relied on cross-sectional self-reported perceptions from selected Colleges of Education and may not capture all institutional variations. Future research could incorporate longitudinal enrolment records, compare resource effects across regions and institution types, and assess how specific resource investments change enrolment trajectories over time (Saunders *et al.*, 2019).

Data availability

Data can be obtained from the corresponding author upon reasonable request.

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Competing Interest

Authors declare no competing interest or so ever.

Authors' contributions

The study was carried out in collaboration between all authors. Author NF, VM, and DS came out with the design of the study, performed the statistical analysis and the analyses of the study, and wrote the first draft and protocol of the manuscript. Authors NF and PAAM worked and managed the literature. All authors read and approved the final manuscript before submission.

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