

From Passive Recipients to Active Agents

The Unrecognised Power of Learners in Dual TVET Transfers to West Africa

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Abstract Learners are often the last to be consulted in international vocational education reform, yet they are the first to experience its shortcomings. In the construction sector across West Africa, young people are expected to perform as skilled workers despite training that frequently fails to connect theoretical instruction with practical application. This paper critically examines how learners respond to fragmented dual vocational education systems, especially in contexts where donor-supported structures have deteriorated following project withdrawal. Drawing on a gender-disaggregated cross-sectional survey of 161 learners (122 male and 39 female) enrolled at a public technical institute in southern Ghana that was initially supported through German development cooperation, the study explores how learners navigate systems in which dual training exists more in form than in function. Using the concept of bounded agency, the research demonstrates that learners construct alternative learning pathways by securing informal attachments, relying on peer networks, and developing self-directed career strategies. While male learners report higher levels of confidence in workplace transitions, female learners face more significant barriers in gaining access to sites, receiving mentorship, and having their skills recognised. These findings reveal gendered asymmetries in the learner experience and expose the deeper limitations of donor-driven training models. Learners' informal coping strategies do not represent disengagement from the dual system but instead reflect intentional adaptation in the face of structural neglect. This suggests that fragmented training systems do not erase learner ambition but shift the burden of coordination onto young people themselves. The study concludes that recurring issues such as weak employer engagement, symbolic certification, and gendered exclusion are not incidental but symptomatic of transfer logics that fail to sustain local ownership. It calls for institutional reforms that include learner-centred accountability, gender-sensitive placement strategies, and sustained private sector participation that extends beyond the donor cycle.

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1 Introduction

The transfer of dual technical vocational education and training (dTVET) models from Europe to Africa has become a dominant reform strategy in global skills development policy. While these reforms are often promoted for their potential to align vocational education with labour market needs, they are frequently implemented without sustained attention to local realities, particularly the experiences of learners. This section introduces the rationale, context, and conceptual direction of the study, arguing for a repositioning of learners not merely as beneficiaries of dual systems, but as active agents navigating their limitations.

1.1 Background

The transfer of European-inspired dual technical and vocational education and training (dTVET) systems to African contexts has emerged as a dominant trend in international skills development over the past two decades (Euler, 2023; Walther, 2008). These reforms, typically introduced through donor-supported initiatives, aim to replicate the "best practice" of integrating school-based and workplace-based learning to enhance youth employability, especially in sectors such as construction, manufacturing, and engineering (Walther, 2008; OECD, 2018; King & Palmer, 2010). At the heart of this model lies the assumption that systems developed in countries such as Germany, Switzerland, or Austria can be adapted through careful institutional design to meet the realities of West African TVET systems.

Euler (2023) identifies eleven interrelated dimensions that, from his perspective, underpin the successful transfer of dual (or dualised) TVET systems. These include policy scope, duality, quality development, and participatory governance. At their core, these elements require a functional balance between state and industry actors, robust quality assurance, and institutional flexibility. However, these models often arrive in African contexts with limited attention to the lived realities of those expected to embody them: The learners.

1.2 Problem Statement

While dTVET frameworks are acclaimed in policy discourse for bridging education and employment (OECD, 2018), their actual implementation in African contexts frequently results in fragmented systems with weak employer engagement, superficial curriculum localisation, and minimal post-project continuity (King & Palmer, 2010; Bashir et al., 2018). In the studied Ghanaian technical institute, originally developed through German-Ghanaian cooperation in the 1980s, the dual programme was designed to combine school-based instruction with structured workplace attachments. However, over time, this alternation has become largely nominal. In Ghana's construction sector, a small group of well-established foreign contractors, mostly European, had long dominated major projects, but were increasingly challenged by a growing number of Chinese firms and other new entrants (Sutton & Kpentey, 2012; Fu & Auffray, 2015). These firms tend to engage through short term, project-based contracts rather than through long term training commitments (Laryea, 2010; Fu & Auffray, 2015). In this context, the industry partnerships that had supported learner attachments during the initial phase of German cooperation were not systematically renewed or replaced once projects ended, leaving the institute without stable firm level hosts for regular workplace learning (Darvas & Palmer, 2014). As a result, the dual element

persisted mainly as a formal label within the school rather than as a consistently organised alternation between classroom and workplace. In this context, the deterioration of industry partnerships has had direct implications for learner readiness. Without stable attachments, consistent supervision, or structured opportunities to apply classroom knowledge in real work environments, the programme no longer provides the conditions necessary for learners to develop occupational competence (Mesuwini et al., 2024). Indeed, learners certified on paper are often unprepared in practice (Madambi, 2025; Majola, 2025), particularly in high-risk trades such as construction (Windapo, 2016). On site, they are expected to operate as skilled workers, although many remain helpers: symbolically qualified but structurally constrained (Majola, 2025; Northrup, 1992). Understanding how learners respond to these limitations is not only academically relevant, but essential for designing accountable and sustainable training models in that specific context.

Furthermore, in many post-donor contexts in West African countries such as Ghana, the foundational pillars of dTVET erode over time. Here, post-donor contexts refer to settings where earlier donor-funded reforms have been implemented, often with substantial technical assistance and investment, but where the institutional arrangements required for their continuation weaken once project cycles end. Although donors may still provide intermittent support at the sector-level, the specific partnerships, cost-sharing mechanisms, and coordination structures that once underpinned dual training are no longer maintained in a systematic way (Darvas & Palmer, 2014). As a result, features introduced during donor engagement such as modular curricula, workplace attachments, and instructor upgrading, tend to remain superficial or gradually erode when external funding and oversight diminish (Li & Pilz, 2023). In the studied institute, for example, the dual principle is nominally preserved through a competency-based learning pathway, yet the absence of structured industry participation means that learners' workplace roles remain largely symbolic rather than substantive. Moreover, weak participatory governance and unreliable financing have constrained the system's adaptability and undermined its legitimacy (Euler, 2023; Langthaler, 2015). The failure to institutionalise these core dimensions illustrates the fragility of dTVET transfers when they are not structurally embedded. While Euler's systemic prerequisites provide a useful benchmark for judging system quality, achieving and sustaining these conditions in resource-constrained, post-donor settings remains inherently challenging.

Extensive research exists on TVET policy transfer and donor engagement (Phillips & Ochs, 2004; Steiner-Khamsi, 2014; McGrath, 2012). This work tends to focus on policy design, curriculum reform, or governance structures. Studies such as those by Walther (2008) and Powell and McGrath (2019) have examined the political economy of skills development, while authors such as Busemeyer and Trampusch (2011) and Euler (2023) have identified the institutional requirements for "successful" dual training. However, less attention has been paid to how learners navigate these imported models, especially when they deteriorate post-donor. Research on learner agency in VET is emerging (e.g. Evans, 2007; Billett, 2011), yet often in Global North settings where system functionality is assumed.

Finally, gendered dimensions remain similarly underexplored. Aprea and Sappa (2014) demonstrate how gender shapes vocational identity formation, but few studies have empirically examined how female learners in Global South construction trades experience and respond to systemic exclusion. Existing frameworks often presume system functionality, leaving untheorised the question of what agency looks like in non-functioning or deteriorated dTVET systems.

1.3 Aims and Objectives

This paper addresses two key gaps. First, it responds to the absence of learner-centred perspectives in evaluating dTVET transfer outcomes in post-donor contexts. Second, it introduces a gender-disaggregated, empirical account of how learners, particularly women, exercise agency in systems that no longer deliver on the promises of duality. By focusing on a public technical institute in Ghana originally established through German bilateral cooperation, the paper provides insight into how learners in construction trades navigate the disintegration of donor frameworks.

The study contributes conceptually by extending Evans' (2007) model of bounded agency into the under-theorised terrain of post-donor TVET systems, understood as systems where earlier dualisation efforts are no longer actively maintained through coordinated donor-state-industry structures. It also draws on Bourdieu (1986) to explain why vocational capital accumulated through training often fails to convert into field-relevant legitimacy, especially for marginalised learners. Practically, it offers concrete implications for learner-centred monitoring mechanisms, and gender-responsive reform design. This study addresses the following research questions:

RQ1: How do learners navigate and experience dTVET systems?

RQ2: What strategies do learners use to overcome barriers within formal and informal vocational education structures in the context of the present study?

RQ3: How do learners, particularly women, exercise agency within a system that often marginalises their participation?

The research is based on data from 161 learners enrolled in construction-related trades. The unit of analysis is the learner, with gender disaggregation allowing for comparative insight into differentiated forms of agency.

The article proceeds as follows: Section 2 presents the research context of the study. Section 3 outlines the conceptual framework, drawing on literature on dTVET transfer, bounded agency, and vocational capital. Section 4 describes the sampling strategy, and data collection methods. Section 5 presents the findings with a focus on gendered disparities in perceived training relevance, industry exposure, and learner strategy. Section 6 discusses the implications of these findings in light of other donor-supported TVET projects in the region. The paper concludes with a call for learner-centred accountability mechanisms that extend beyond donor timelines and address structural gender exclusion in vocational systems.

2 Research Context: Ghana's TVET System

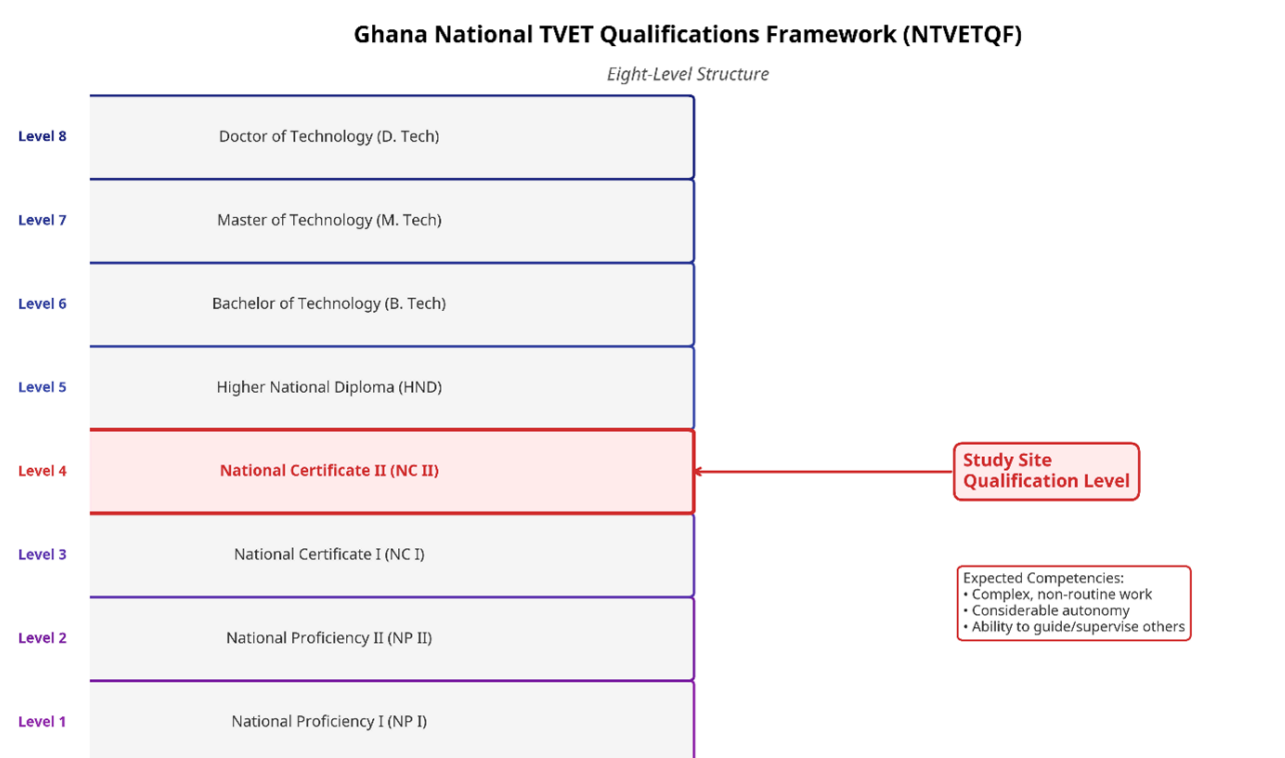
This section presents the research context of the study, outlining the policy environment, institutional structures, and qualification frameworks that shape the implementation of dual and competency-based training in Ghana. These contextual foundations are essential for understanding the institutional conditions under which the studied dual program operates, and the challenges learners navigate.

2.1 The National TVET Framework: A System in Transition

Ghana's Technical and Vocational Education and Training (TVET) sector has undergone significant reforms aimed at aligning skills development with the needs of the economy. The system is centrally governed by the Commission for Technical and Vocational Education and Training (CTVET), which was established by the Education Regulatory Bodies Act, 2020 (Act 1023), to regulate, promote and administer TVET in the country (Government of Ghana, 2020). A key pillar of this reform is the National TVET Qualification Framework (NTVETQF), a system designed to provide a clear and flexible pathway for skill acquisition and recognition, from basic proficiency to tertiary-level qualifications, as shown in Figure 1 (CTVET, 2023; Owusu-Agyeman, 2017).

In principle, the NTVETQF offers two main pathways: a traditional, time-bound and exam-based route, and a more flexible, industry-oriented Competency-Based Training (CBT) route. The CBT model is designed to be learner-centred and outcome-focused, with assessment based on the demonstrated mastery of specific occupational standards developed in collaboration with industry Sector Skills Bodies (SSBs) (CTVET, 2023). As of 2023, twelve SSBs have been established across twenty-four economic sectors to define competency standards and guide curriculum development (CTVET, 2023). It is within this CBT framework, which continues to mandate a period of industrial attachment for graduation, that the dual VET model, heavily promoted by international development partners, is situated.

Figure 1: Map of the Educational System in Ghana Based on the NTVETQF



2.2 The Dual VET Model: Policy Ideals vs. Practical Realities

The dual VET model in Ghana, inspired by the German system, is designed to formally integrate theoretical learning at a technical institute with practical, work-based learning at a partner company (IPPG Africa, 2017; GIZ, 2025). The policy ideal is to create a synergistic relationship where apprentices apply classroom knowledge in a real-world context and bring practical challenges back to the learning environment, thereby bridging the persistent gap between education and industry (Euler, 2013). However, the practical implementation of this model reveals a significant disconnect between policy and reality. The organisational structure, particularly in a post-donor context, is often fraught with systemic weaknesses that undermine its effectiveness. These include:

1. **Weak employer engagement:** While the model depends on strong industry partnerships, many companies are reluctant or unable to provide structured, high-quality training placements. This is often due to a lack of incentives, the absence of a strong tradition of apprenticeship, and the perceived cost of supervision and training (Allais, 2025; ACET, 2025). Research across Africa reveals persistent challenges of limited private sector engagement and weak alignment between training and labour market needs (ACET, 2025). In Ghana specifically, employers frequently complain about the low quality of TVET training, noting that new recruits with technical training lack practical skills (Fu et al., 2013).
2. **Superficial workplace attachments:** Consequently, workplace attachments are often limited in duration and quality. Instead of being integrated into core business operations, learners are frequently assigned to observe or perform menial tasks, offering little opportunity for meaningful skill acquisition (Donkor et al., 2009). Employers report difficulty finding candidates with job-ready skills, practical experience, and soft skills, despite formal TVET qualifications (UNICEF Ghana, 2024).
3. **Curriculum and assessment disconnect:** There is often a significant lag between the curriculum taught in technical institutes and the rapidly evolving technologies and practices of the industry (Ababio et al., 2024). Furthermore, assessment procedures, while nominally competency-based, often revert to prioritising the certification of theoretical knowledge over the rigorous evaluation of practical competence in a real-world setting (Owusu-Agyeman et al., 2025).
4. **These organisational flaws explain why many learners, despite receiving a formal certification, remain unprepared for the demands of the workplace. The value of vocational education cannot be assessed solely by access or certification. Rather, attention must be paid to the conversion of vocational experiences into tangible social and labour market outcomes (Bourdieu, 1986).**

2.3 The Study Site: A Case of Post-Donor Deterioration

The Ghanaian Public Technical Institute was established in 1982 through a collaboration between the Ghanaian Government and the German Government's Technical Cooperation (GTZ). Initially known as a Vocational Training and Trade Promotion Centre, the institute aimed to provide skilled labour for the industrial development of the Southern Region and Ghana at large. The focus was on refining the skills of artisans such as mechanics and welders. Over the years, it has expanded its programmes and facilities, becoming a prominent mixed-sex technical school in the region. The institute offers a variety of technical disciplines, including Welding and Fabrication Technology, Electrical

Engineering Technology, Automotive Engineering Technology, Building and Construction Technology, Fashion Design Technology, and more. The institute's establishment was part of a broader effort to enhance technical education in Ghana, aligning with the country's industrial and economic development goals. It continues to play a vital role in training skilled professionals to meet the demands of various industries within the region and beyond.

The institute was an early adopter of the dual VET model, adopting functioning features of its system, formalising industry partnerships, and dedicating instructor training. While the Government of Ghana, through CTVET, recently initiated a broader, phased roll-out of dTVET in the 2023/24 academic year across nine selected institutions (CTVET, 2023), the studied institute represents an earlier generation of dual VET implementation. Its status as an early adopter with a longer history makes it a critical case for examining the long-term challenges of policy transfer and post-donor sustainability.

Following the withdrawal of the donor, the foundational pillars of the dual model began to erode, making the institute a critical case for examining the challenges of post-donor sustainability. While the dual principle is nominally preserved through the CBT-pathway, the system has deteriorated in several key respects. Industry partnerships have weakened, with fewer companies offering meaningful training placements. The specialised equipment provided by the donor has, in some cases, fallen into disrepair without dedicated funding for maintenance. Most importantly, the intensive technical oversight and quality assurance mechanisms the donor provided have disappeared, leaving the institute to manage the complex system on its own.

Furthermore, while the NTVETQF provides a coherent national structure for standardising qualifications, the actual value of a certificate is not guaranteed by its formal status alone. The institutional context and the credibility of the training process are critical in determining whether a credential retains its intended signalling power in the labour market. Understanding how credentials may lose value requires situating the institute's programmes within Ghana's NTVETQF. The institute's certificates, delivered through the Competency-Based Training (CBT) pathway, are formally aligned with NTVETQF levels and are intended to signal nationally recognised occupational competence (CTVET, 2023; Owusu-Agyeman, 2017). In principle, this alignment ensures portability of qualifications across sectors and provides learners with a clear progression route from foundational to advanced technical levels (Owusu-Agyeman, 2017).

For the construction trades focused on in this study, both the traditional, time-bound exam route and the industry-oriented CBT pathway led to a Certificate II qualification, which is formally mapped to Level 4 of the NTVETQF. At this level, graduates are expected to perform a wide variety of complex and non-routine work with considerable autonomy and the ability to guide others (CTVET, 2023). In principle, this equivalence is intended to create a unified national standard. However, the two routes are distinguished by their pedagogical and assessment philosophies: the former relies on standardised summative examinations, while the CBT route is designed to be outcomes-based, with assessment theoretically grounded in the demonstrated mastery of industry-defined competencies.

However, the signalling function of a qualification depends not only on its placement within the national framework but also on the credibility of the training process through which it is obtained (Spence, 1981; Patzina & Wydra-Somaggio, 2020). When donor-supported components erode over time, employers may question whether the competencies associated with a given NTVETQF level have been reliably assessed (Fu et al., 2013; UNICEF Ghana, 2024). As a result, even though the certificate formally retains its national status, its perceived value in the labour market may decline because it no longer guarantees the depth of practical exposure or training quality employers

previously associated with the programme (Araki & Kariya 2022; Mahlangu & Mtshali, 2024; Majola, 2025). The devaluation of the credential therefore stems not from changes in the framework itself, but from shifts in the institutional conditions under which the qualification is produced (Patzina & Wydra-Somaggo, 2020; Civile et al., 2025).

3 Literature Review

Efforts to adapt dual technical and vocational education and training (dTVET) models in West Africa have been shaped by a persistent tension between policy ambition and systemic reality. While much of the literature on TVET transfer focuses on institutional frameworks, governance models, and donor-state dynamics, considerably less attention has been paid to the situated experiences of learners navigating deteriorated or partial systems. This chapter reviews four intersecting bodies of literature relevant to this study. First, it explores the concept of bounded agency and its applicability in disrupted TVET environments. Second, it engages with Bourdieu's theory of vocational capital to assess the structural limitations learners face when attempting to convert training into labour market legitimacy. Third, it examines gendered dynamics within male-dominated vocational fields, with a focus on learner strategies in the absence of structural support. Finally, it presents a conceptual synthesis that integrates bounded agency and capital theory to frame the study's empirical analysis.

3.1 Bounded Agency in Disrupted Learning Contexts

The notion of bounded agency provides a valuable conceptual lens for understanding learner behaviour in fragmented vocational education systems, particularly in post-donor settings where structural supports have deteriorated. Originally formulated by Evans (2002; 2007), bounded agency rejects simplistic binaries of structure versus agency and instead emphasises how individuals act within the constraints and possibilities afforded by their socio-institutional environment. In dTVET systems that have weakened due to aid withdrawal, learners encounter fragmented learning trajectories and limited institutional coherence. This situational boundedness does not imply passivity but rather reveals a mode of action that is strategic, adaptive, and context-dependent.

Learners in disrupted systems are often forced to navigate between disconnected domains of knowledge: formal school-based instruction and informal or absent workplace learning. Rather than progressing through a cohesive dual model, they must construct pathways themselves, often with minimal institutional support or oversight. Evans (2007) emphasises that agency in such contexts is neither autonomous nor purely reactive but emerges through a process of constrained negotiation shaped by learners' positions within social structures, their accumulated forms of capital (Bourdieu, 1986), and their perceived scope of action. Learners make decisions about placements, training goals, and career expectations based not on ideal conditions but on the practical limitations of their environments.

The responsibility to "bridge the gap" between school and workplace is thus offloaded onto the learners, particularly those from disadvantaged backgrounds. While the dual training model promises systemic integration, in practice, it is the learners who must broker informal attachments, locate mentorship opportunities, and reconcile divergent logics of learning. These demands are intensified in contexts where public institutions lack capacity to sustain placements or monitor

employer involvement (McGrath, 2012). The burden of navigating this incoherence reflects a form of bounded intentionality, where learners act purposefully, yet within systems they did not design.

Gender further compounds this boundedness. Female learners in male-dominated fields such as construction often encounter exclusion from key learning sites and are disproportionately disadvantaged by the absence of structured placement mechanisms (Alla-Mensah & McGrath, 2025; Bray-Collins et al., 2022). Their experiences are marked by restricted access to mentorship, scepticism about their competence, and social pressure to conform to gendered expectations. Yet these learners do not merely withdraw; they adopt situated strategies such as over-performance in theoretical domains or pursuit of informal training to assert agency within circumscribed options.

Rather than treating these workarounds as deficiencies, bounded agency theory invites us to recognise them as rational adaptations to systemic incoherence. Studies in Ghana and other African contexts show that, when workplace learning structures are weak or absent, learners often turn to informal strategies to secure skills, contacts, or opportunities (Palmer, 2007; McGrath, 2012). These adaptive practices reflect learners' attempts to compensate for fragmented institutional arrangements and poorly coordinated school-work transitions because the latter fail to provide the structured conditions that dual training presupposes. Acknowledging learner agency therefore cannot obscure the more fundamental reality that key structural dimensions, such as coordinated employer involvement, predictable placement mechanisms, and institutional oversight, remain underdeveloped or unstable in many post-donor contexts (Darvas & Palmer, 2014; Li & Pilz, 2023). While bounded agency helps illuminate how learners navigate such fragility, it repositions learner agency as a relational, situated process, deeply shaped by gender, institutional arrangements, and the legacy of externally driven reform. It also underscores that agency cannot substitute for system-level responsibilities. Learner strategies may enable temporary participation, but they do not correct the fragmentation that donor-dependent reforms often leave behind. Durable reform requires addressing these structural failures directly by analysing the adaptive practices learners employ to survive within them.

3.2 Vocational Capital and the Limits of Conversion

Drawing on Bourdieu's (1986) theory of capital, vocational education research increasingly highlights the concept of vocational capital, which can be characterised by the bundle of skills, experiences, dispositions, and symbolic credentials that learners accumulate through formal and informal training. Yet, as Bourdieu argues, capital is only effective when it is recognised within the field in which it is deployed. Possessing capital does not guarantee advantage unless the rules allow for its legitimate conversion.

In dTVET systems weakened by donor exit or poor localisation, the institutional structures required for such recognition are often lacking. Learners may acquire technical skills and certification, but find themselves unable to translate this into employment, further training, or status. As Allais (2014) cautions, qualification frameworks and skill-based policies risk becoming disconnected from the knowledge systems and labour market institutions that render learning meaningful. The erosion of employer engagement, weak placement mechanisms, and uncoordinated assessment practices mean that vocational capital is increasingly devalued in the eyes of industry. A certificate from a technical institute, once backed by donor-supported legitimacy, may lose its signalling power when project support ends and quality assurance mechanisms fade.

This devaluation is unevenly distributed. Drawing on Bourdieu's insight that capital is always relational and stratified, several studies underscore how vocational capital is differentially acquired and recognised across lines of gender, class, and geography (Pilz, 2016; Trampusch, 2010). Learners from rural areas or low-income backgrounds may lack access to high-quality placements or mentorship networks that are vital for capital conversion. In particular, female learners often experience structural barriers that actively diminish the value of their vocational capital. For example, in construction trades and other male-dominated sectors, they are routinely assigned marginal tasks or excluded from worksite rotations, limiting both skill acquisition and credibility in the eyes of employers (Alla-Mensah & McGrath, 2025; Bray-Collins et al., 2022).

This experience of misrecognition is intensified when learners encounter what Bourdieu (2000) terms "cleft habitus": The sense of disappointment becomes more acute when learners, having internalised the expectations and aspirations promoted by formal training, find themselves unable to fulfil them due to the contradictory and often limiting realities of their social environment. When these expectations are unmet, they do not necessarily disengage. Rather, they engage in forms of recalibrated agency, repurposing their vocational capital through informal apprenticeships, entrepreneurial strategies, or alternative career pathways. These trajectories may lack formal recognition, but they reveal a pragmatic response to a broken promise of social transformation.

The concept of vocational capital thus sharpens the analysis of TVET effectiveness beyond enrolment or completion rates. It directs attention to how learners themselves assess and repurpose their training in contexts of institutional fragility. Moreover, it exposes the risk of symbolic violence where learners are held accountable for their own marginalisation, despite operating in a system that has systematically limited the conversion of their educational investment into meaningful opportunity.

3.3 Gendered Agency in Male Dominated Trades

While international TVET policies have increasingly embraced gender equity rhetorics, this shift often fails to translate into practice, particularly in male-dominated sectors such as construction. Structural and cultural barriers persist, shaping how female learners experience vocational training, and limiting their access to meaningful occupational trajectories. In such settings, gender is not simply a variable of representation but a structuring force that mediates how agency is enacted, vocational capital is acquired, and legitimacy is conferred.

Empirical research across Africa suggests that women in trades such as construction often encounter multiple, overlapping constraints. These include exclusion from physically demanding or high-status tasks, limited mentorship, discriminatory attitudes from instructors and peers, and logistical barriers to site-based training (Bray-Collins et al., 2022; Alla-Mensah & McGrath, 2025). Formal enrolment does not guarantee exposure to the full scope of vocational learning. Instead, women are frequently relegated to peripheral functions or administrative roles, even when their technical competence is equivalent to that of their male counterparts. As a result, their vocational capital is not only undervalued but often actively eroded through exclusion.

These gendered constraints cannot be adequately captured by frameworks that treat agency as a static or individual trait. Evans' (2007) concept of bounded agency offers a more dynamic account, recognising that learners make decisions within socio-institutional environments that shape both their opportunities and perceptions of what is possible. Female learners exercise agency not through

unrestricted choice, but through strategic negotiation, resilience, and improvisation. They recalibrate aspirations, over-perform in theoretical domains, and seek informal pathways to compensate for institutional failure.

The disconnect between policy commitments to gender inclusion and the everyday realities of vocational training is further exacerbated in post-donor contexts, where accountability mechanisms tend to weaken. Without sustained support from employers, governments, or donors, female learners are often the first to be excluded from work placements, practical assessments, and advancement opportunities. McGrath (2012) and Joseph and Leyaro (2019) highlight how such exclusions become self-reinforcing: women's absence from critical sites of learning is cited as evidence of unsuitability, thereby justifying continued marginalisation.

Nevertheless, the absence of formal support does not eliminate agency. Female learners develop situated practices that reflect both adaptation and resistance. These include building informal peer support networks, strategically aligning with sympathetic instructors, or deliberately seeking out jobs and apprenticeships outside the official system. Such actions, while not always visible to institutional actors, are crucial for skill acquisition, confidence-building, and identity formation. As Aprea and Sappa (2014) show in the Swiss context, learners interpret and navigate school-work discontinuities in gendered ways, with female trainees often developing complex strategies to assert their competence in environments that do not readily accommodate them.

By placing gender at the centre of TVET analysis, this section underscores that post-donor system deterioration is not experienced uniformly. The erosion of support structures disproportionately affects marginalised learners, particularly women, whose agency is doubly constrained by institutional decay and social norms. Understanding how these learners navigate exclusion requires a theoretical approach that sees agency as emergent, situated, and shaped by power. Gender-responsive analysis is therefore not a secondary concern, but a necessary condition for evaluating the effectiveness and equity of vocational education in fragile systems.

3.4 Integrating Bounded Agency and Vocational Capital in Post Donor Contexts

This study adopts a dual theoretical lens, namely bounded agency and vocational capital, to interrogate how learners in West African TVET systems respond to the erosion of dual training structures following donor withdrawal. These frameworks illuminate different but interconnected dimensions of learner experience: Bounded agency explains the constraints and strategies shaping learner action, while vocational capital theory exposes the symbolic and material limitations of the qualifications learners acquire.

Evans (2002; 2007) conceptualises agency not as the autonomous execution of free choice but as a socially situated, temporally shaped process. In contexts where learners face limited and often deteriorating options, their actions are best understood as strategic adaptations rather than as signs of disengagement. This becomes especially salient when the formal promise of dual training is undermined by weak employer participation, unmonitored placements, and degraded learning environments. Learners may still act intentionally, but their intentions are bounded by institutional disarray, gendered exclusion, and resource constraints.

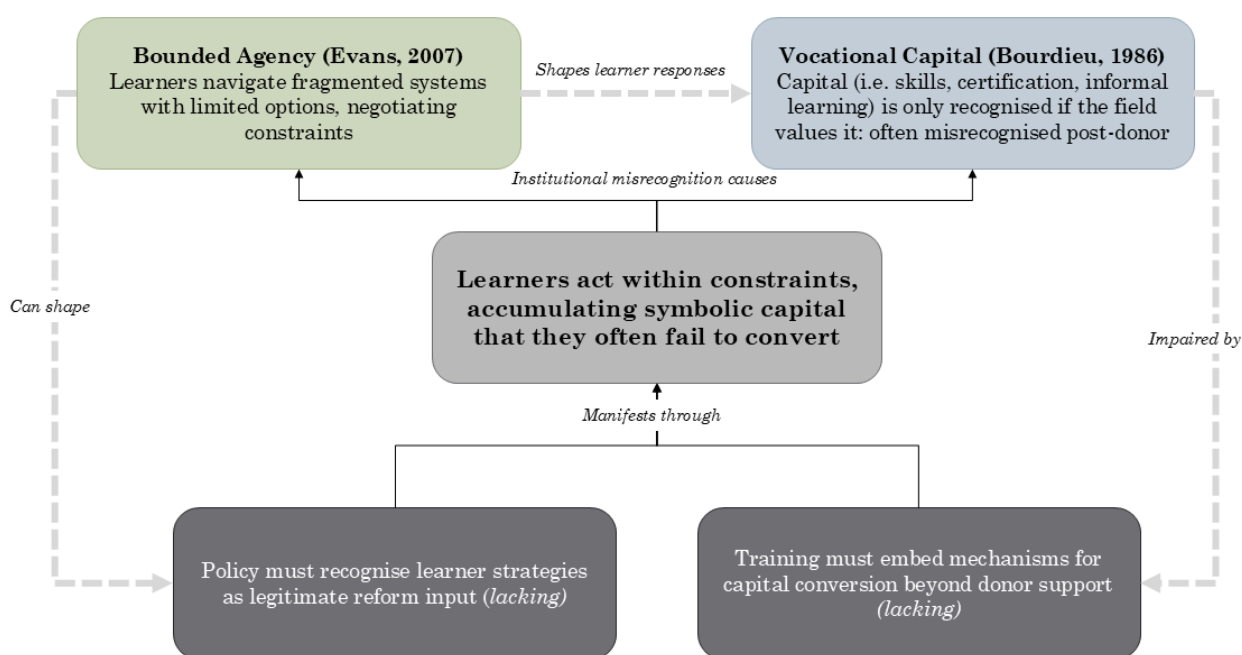
In parallel, Bourdieu's (1986) theory of capital provides a robust vocabulary for analysing the kinds of value learners acquire through vocational training and the conditions under which these forms of value can(not) be converted into employment or social recognition. Vocational capital, as

adapted by Pilz (2016) and Trampusch (2010), includes not only technical knowledge and practical competence but also the embedded cultural and social resources that make such knowledge legible to employers. However, in post-donor contexts, the devaluation of credentials, the loss of employer partnerships, and the shrinking of quality assurance regimes render this capital structurally fragile. As Allais (2014) argues, when qualifications lose their contextual relevance and institutional legitimacy, they risk becoming little more than symbolic artefacts.

The intersection of these two frameworks is particularly revealing when examining learner strategies in deteriorated systems (Figure 2). Learners may continue to seek workplace exposure, form peer learning networks, or pursue further education, but the outcomes of these efforts are contingent on whether the surrounding structures recognise and reward them. Where institutional actors or labour markets do not validate learner efforts, the capital learners accumulate cannot be effectively mobilised. This misalignment is not neutral; it disproportionately affects those already marginalised by gender, geography, or class (Bray-Collins et al., 2022; Alla-Mensah & McGrath, 2025).

Indeed, female learners face a double constraint: their agency is bounded not only by institutional dysfunction but also by normative expectations that render their vocational capital less visible or less legitimate. Their efforts to upskill, adapt, and persist occur within a system that rarely rewards such resilience. As Bourdieu (2000) suggests, when learners internalise aspirations that are no longer structurally supported, the result is often a “cleft habitus”. The experience of disillusionment, however, does not erase agency. Instead, it gives rise to what might be termed a recalibrated agency: Learners redirect their aspirations, reconfigure their pathways, and seek alternative forms of legitimacy, often outside the formal system.

Figure 2: Learner Agency in Post-Donor Dual TVET Systems: A Conceptual Framework



Note. This conceptual framework illustrates the intersection between bounded agency (Evans, 2007; 2002) and vocational capital (Bourdieu, 1986; 2000) in the context of deteriorating dual TVET systems. It highlights how learners navigate fragmented school-work structures and contested fields of recognition. Arrows represent the dynamic yet constrained pathways through which learners seek to bridge structural disjunctures and reconfigure their aspirations.

By integrating these frameworks, this study repositions learner agency as a central analytic category, not as an individual trait or outcome but as an ongoing process of navigation through systemic breakdown. Likewise, vocational capital is treated not merely as a stock of skills but as a relational asset whose value is conditioned by institutional credibility and social recognition. The conceptual synthesis foregrounds a core contradiction in post-donor TVET systems: Learners are expected to behave as autonomous agents while being denied the structural conditions necessary for such autonomy to yield meaningful outcomes.

This theoretical grounding informs the design and interpretation of the empirical study that follows. By focusing on gender-disaggregated survey data from a public technical institute originally established through donor cooperation, the analysis seeks to trace how bounded agency and fragile vocational capital interact in shaping learner responses to systemic fragmentation.

4 Methodology

This study employs a quantitative survey design to investigate how vocational learners navigate a deteriorated dual training environment in a post-donor institutional context. Anchored in an agency-focused theoretical framework, the methodology prioritises learner perspectives on training quality, workplace exposure, aspirations, and coping strategies. The aim is not statistical generalisation, but rather to generate empirically grounded insights into how young people exercise agency within fragmented and resource-constrained TVET systems. The following sections detail the sampling logic, data collection procedures, measurement design, and methodological limitations.

4.1 Sampling

This study targeted vocational learners enrolled in construction-related trades at a public technical institute in southern Ghana. Originally established through German-Ghanaian bilateral cooperation, the institute had, during the period of donor engagement, integrated key features of the dual training model: modular curricula, workshop instruction, and industry-based attachments. Following the cessation of donor support, these features have progressively deteriorated, rendering the site a critical case for analysing the implications of post-donor fragmentation on learner experiences (Flyvbjerg, 2006). The unit of analysis is the individual learner.

Given institutional access constraints and the exploratory nature of the study, a non-probability, convenience sampling strategy was employed. Questionnaires were distributed to all Year 2 and Year 3 learners in the Building Technology courses who were physically present at the time of data collection. While this approach limits statistical generalisability, it was contextually appropriate for mapping learner strategies and perceptions in an under-researched post-donor training context.

161 distributed questionnaires were returned. The final sample comprised 122 male and 39 female learners. Respondents ranged in age from below 16 to 25, with 62% between 16 and 18 years old. All were enrolled in either the traditional exam route or the newer competency-based training stream of the same training programme.

4.2 Data Collection

Prior to data collection, the survey instrument was piloted with eight learners from a different course to test for clarity, cultural relevance, item comprehension, and survey length. Minor linguistic adjustments were made to improve readability and contextual specificity.

The main survey was conducted in late February 2025, outside formal instructional hours, under the supervision of the research team. While instructors facilitated classroom access, they were not involved in data collection or learner interactions. Participation was voluntary and uncompensated. Learners were informed of the study aims, assured of confidentiality and anonymity, and advised that participation would have no bearing on academic outcomes or institutional relations. Written informed consent was obtained. Ethical clearance was granted by the principal of the host institution.

The self-administered questionnaire format allowed for efficient coverage of a large cohort but also introduced potential limitations, including risks of social desirability bias, inconsistent interpretation due to varied literacy levels, and the absence of interaction to probe deeper meanings. While these risks were partially mitigated through piloting and in-situ clarification, they are acknowledged in the interpretation of findings.

4.3 Survey Structure and Measures

The questionnaire comprised 92 items organised into five thematic blocks, each designed to empirically capture different dimensions of the learner experience within a deteriorated dual training context (Table 1). The structure reflects the study's theoretical concern with learner agency, bounded autonomy, and the informal adaptations that emerge under fragmented TVET regimes.

Constructs were adapted from established TVET studies (e.g. Billett, 2011; McGrath, 2012) but contextualised based on local realities identified during the pilot phase and prior field engagement. Cronbach's alpha values exceeded 0.75 for all composite scales, indicating acceptable internal reliability. Negatively worded items were reverse-coded to ensure consistent interpretation. Composite indices were calculated by averaging item responses per construct.

4.4 Methodological Reflections and Limitations

While not statistically representative, the selected institute qualifies as a theoretically significant case due to its hybrid legacy of donor influence, partial dualisation, and institutional erosion post-donor withdrawal. Its relevance lies not in generalisability, but in its ability to reflect systemic tensions between imported models and local realities. The findings thus serve as analytical generalisations (Yin, 2018), rather than statistical extrapolations.

The reliance on a purely quantitative, self-report methodology provides broad insights into learner perspectives, yet it cannot fully capture the complexity and temporality of agency as a lived practice. Without complementary qualitative methods such as interviews, diaries, or ethnographic fieldwork, it is not possible to unpack how learners interpret their strategies, exercise agency over time, or embed meaning in their actions.

Moreover, key structural dynamics such as employer disengagement, policy shifts, or regional disparities in training implementation remain under-explored due to the learner-centric focus of the instrument. Nonetheless, by mapping the contours of learner strategies within a deteriorated

Table 1: Overview of Thematic Blocks and Sample Items From the Learner Survey

Thematic Blocks	Details
Demographics and learner profile	Age, gender, year of training, trade specialisation, and enrolment track (exam-based or competency-based).
Perceived training quality and relevance	Likert-scale items assessing access to materials and equipment (e.g., “I have regular access to functioning tools and machines during workshop sessions”), instructional quality (e.g., “Teachers explain clearly how skills taught relate to real-world construction tasks”), and curricular relevance to actual workplace demands.
Workplace exposure and mentorship	Frequency, duration, and source of site-based learning. Both formal placements and informal arrangements were considered (e.g., “Have you ever participated in a construction site attachment?” with follow-ups on duration, who arranged it, and perceived learning value).
Career orientation and aspirations	Likert-scaled and open-ended items regarding learners' post-graduation plans, aspirations for self-employment or wage labour, and perceived enablers and obstacles (e.g., “What is your preferred career path after completing this programme?” and “What are the biggest challenges you expect to face in achieving this path?”).
Learner agency and coping strategies	Informal, often invisible strategies learners employ to compensate for institutional gaps. This included items such as: “I have independently searched for a construction site to gain experience.,” “I regularly learn new skills by observing peers or workers outside class.,” and “I have changed my career plans due to lack of site exposure.”

Note. The questionnaire contained 92 items across five thematic blocks. Items were adapted from established TVET survey instruments and contextualised for the Ghanaian setting. Each block targeted a distinct dimension of learner experience in deteriorating dTVET contexts.

training environment, the study provides novel insights into agency as a response to systemic failure, especially for marginalised learners whose voices are often absent from reform discourse. Future studies should adopt a sequential mixed-methods design, combining survey breadth with qualitative depth, especially to illuminate the gendered dimensions of agency, informal learning ecosystems, and the long-term outcomes of strategic adaptation in TVET systems.

5 Results

5.1 Perceived Training Quality and Misalignment With Workplace Demands

Learners were asked to evaluate how well their training prepared them for practical tasks and the realities of construction work. Across all indicators, the data reveals a consistent concern: the formal instruction learners receive at school is not adequately aligned with industry expectations.

Only 36.6% of learners agreed or strongly agreed that “the curriculum [they] follow at school is relevant to the requirements on the construction site”, while nearly 33% disagreed. The remaining 30% were neutral. This distribution suggests a fragmented perception of training relevance, with only a minority of learners feeling confident that their classroom knowledge reflects site-level expectations.

The gap between theory and application becomes even more evident when learners responded to the item: “Theoretical instruction at school helps me apply what I learn on site”. Over 57% disagreed or strongly disagreed, indicating a disconnection between classroom learning and practical execution. Only 17% felt that theoretical lessons were directly useful in the workplace.

Similarly, in response to the item “The way I am taught makes it easy to transfer what I know in the classroom to the real work environment”, only 23.6% of learners agreed. A majority, well over 50%, disagreed, underscoring the pedagogical weakness in how theory is delivered.

Finally, when asked “I can confidently perform common construction tasks as expected by employers”, only 29.8% of respondents agreed. The remainder either disagreed or remained neutral. This is a critical finding: it signals that learners approaching the end of their training do not feel functionally competent, even though they are approaching certification.

5.2 Fragmented Workplace Learning and Missing Employer Engagement

The data reveal a fragmented and inconsistent implementation of workplace-based learning within the dual training structure. When learners were asked whether they had the opportunity to work regularly on a real construction site as part of their training, only 21.7% reported consistent access. A further 43.5% indicated they had irregular or one-time exposure, while 34.8% stated they had no exposure at all. This pattern undermines one of the fundamental premises of dual vocational education : the systematic alternation between classroom instruction and real-world application.

Employer engagement within this fragmented system is notably weak. When asked whether site supervisors or employers helped them understand how to use the skills learned at school, only 18% agreed or strongly agreed. In contrast, 49.7% disagreed, and 32.3% were neutral. This suggests that mentorship is neither systematically integrated into the workplace learning process nor reliably available to learners. The situation is further compounded by learners' responses to the item “Employers are actively involved in evaluating my skills during my workplace training,” where only 13% confirmed such involvement. The vast majority (58.4%) disagreed or strongly disagreed, while 28.6% were neutral.

These findings collectively suggest that the workplace component of dual training has largely been reduced to observational site visits or informal participation. Rather than experiencing structured mentorship and skills evaluation, learners are left without clear guidance or feedback loops. This absence of employer participation not only violates the core principle of the dual model

but also raises concerns about the legitimacy of the certification learners ultimately receive. If employers are not systematically involved in training or assessment, the system risks certifying individuals without a verified standard of workplace competence.

The breakdown in coordination between school and industry partners shifts the burden of integration onto the learners themselves. In some cases, learners reported relying on family members working in the construction sector to gain access to sites. Others described learning tasks through peer demonstrations rather than formal instruction. These self-directed strategies, while indicative of learner initiative, are symptomatic of systemic failure. They reflect what Evans (2007) describes as "bounded agency", an agency constrained by structural deficiencies, where learners compensate for institutional gaps but cannot overcome them entirely.

The collapse of the school-site interface does not imply a complete absence of workplace learning. Instead, it has resulted in a disjointed and unpredictable set of learning conditions, heavily dependent on learners' personal networks, initiative, and resilience. This undermines the equity and coherence of the dual system, especially in a post-donor context where formal structures have eroded and industry partners lack either the capacity or the incentive to remain involved in training delivery.

5.3 Career Planning and Transition Expectations

This section explores the extent to which learners feel equipped to transition into employment following the completion of their training. Several survey items assessed learners' confidence, clarity of career goals, and perceived support in planning for future employment.

Overall, the data indicate a moderately positive outlook regarding employability, but this optimism is not underpinned by structured career support. In response to the item "I feel confident that I will get a job after completing my training", just under half of the learners (47.2%) expressed agreement or strong agreement, while a significant portion (34.8%) remained neutral. Only 18% disagreed. A similar pattern was observed for the item "I have a clear idea of what I want to do in my future career", where 52.8% agreed, 32.3% were neutral, and 14.9% disagreed. These results suggest that while many learners are hopeful about their employment prospects, there is a degree of uncertainty and indecision.

This ambiguity is reinforced by responses to "My training has helped me understand how to reach my career goals", where only 38.5% agreed, and 27.3% disagreed, suggesting that career-related guidance within the training programme is insufficient. Similarly, fewer than 40% of learners agreed with the statement "I know how to prepare for job interviews and applications", highlighting a major shortfall in practical transition support.

Gender differences further compound the issue. Cross-tabulated results (not shown here) reveal that male learners reported higher confidence levels in both job acquisition and career planning. Female respondents were less likely to agree that they had clear plans or felt prepared to enter the workforce. This disparity suggests structural or cultural impediments that restrict female learners' engagement with formal employment pathways.

5.4 Peer Learning, Informal Guidance, and Resourcefulness

To understand how learners navigated institutional shortcomings in workplace coordination, the study included questions about peer learning and the effort required to independently secure practical training. A significant majority, 55.3% of learners, reported that they “regularly receive practical support from friends and classmates in learning construction skills.” An additional 35.4% acknowledged receiving such support “sometimes”, while only 9.3% stated they “rarely” or “never” received help. This underscores the extent to which peer networks function as a critical learning scaffold in contexts where clear instructor guidance and employer mentorship are lacking. This type of learning appears to have become a principal mechanism through which practical knowledge is shared and reinforced.

In terms of obtaining attachment placements, only 9.9% of respondents indicated that their institution had taken the lead in finding their placement. In contrast, 60.2% of learners said they had to find their own attachment, and 28.0% received some support but were still required to initiate contact with firms or relatives. This finding demonstrates a marked decline in institutional responsibility and the growing expectation that learners act as their own placement coordinators. These conditions reveal a critical breakdown in dual training systems where the “dual” component no longer represents a structured alternation between school and industry but rather an informal patchwork navigated by learners themselves.

5.5 Aspirations and Learner Identity

This section investigates learners’ self-perceptions and long-term aspirations, focusing on how they envision their future roles within the construction sector. Learners were asked whether they saw themselves as future master craftworkers or business owners, and to what extent they believed that vocational training would support them in achieving these goals.

The findings reveal a highly aspirational learner cohort. A substantial majority (76.3%) of respondents either agreed or strongly agreed that they aimed to become self-employed business owners or master craftworkers. This high figure signals the motivational resilience of learners, even in contexts where formal structures for supporting entrepreneurial transitions remain weak. Only 11.2% of respondents disagreed or strongly disagreed with this vision, while the remaining 12.5% remained neutral.

Moreover, belief in the transformative power of vocational training remains robust. When asked whether they felt their training would help them achieve their long-term career goals, 71.4% of learners responded affirmatively, while only 9.3% disagreed. This optimism, however, was tempered by learners’ concurrent awareness of institutional limitations. In disaggregated feedback, respondents who lacked consistent workplace exposure or faced challenges in accessing attachments were more likely to express doubt that training alone would be sufficient to support their ambitions.

Gendered patterns were also observed. While male learners were slightly more likely to identify with the role of future master craftworkers, female learners more frequently projected themselves into entrepreneurial roles. This difference suggests a gendered negotiation of occupational identities, likely shaped by the limited opportunities women face in male-dominated site environments. Despite these barriers, female respondents demonstrated strong alignment with

entrepreneurial aspirations, highlighting a potential area for targeted support and gender-sensitive enterprise development.

6 Discussion

6.1 Purpose and Contribution

This study set out to examine how learners navigate and experience dTVET systems in contexts where donor-supported dual structures have deteriorated. Using a post-donor TVET institute in southern Ghana as a case study, the research focused on learner strategies and experiences within a system that retains the symbolic form of dual training but lacks its functional mechanisms. The study placed particular emphasis on gendered variations in these strategies and how learners interpreted, resisted, or adapted to institutional shortcomings.

The primary contribution of this study lies in shifting the analytical focus from the structural and policy levels, which dominate much of the existing literature (e.g., Euler, 2023; Walther, 2008), to the micro-level experiences of learners. By employing a learner-centred analysis grounded in Bourdieu's (1986) theory of capital and Evans' (2007) framework of bounded agency, the study provides a more nuanced understanding of how vocational learners operate in constrained and fragmented training environments. It demonstrates that learners are not passive recipients of a failing system but rather active participants who use available forms of social, cultural, and symbolic capital to navigate training and transition pathways.

6.2 Summary of Results in Relation to Research Objectives

The first research objective explored how learners experience dual training in practice. The results indicated that most learners had limited or irregular access to workplace training and often relied on informal strategies to secure attachments. These experiences reflect a breakdown in the foundational principle of alternation between school and work that characterises effective dual systems. In Bourdieu's terms, the field of vocational training, shaped by donor intentions but inadequately localised, offers symbolic capital (i.e. certification) but lacks the institutional structures necessary for learners to accumulate the practical and cultural capital required for workplace success. Localisation in this context refers to the embedding of dual training structures within national systems through sustained employer participation, sector-led standard setting, reliable financing, and institutionalised quality assurance. These elements ensure the model is not merely transplanted but adapted and maintained through local governance arrangements (Euler, 2013; Li & Pilz, 2023; Allais, 2014). Without these features, learners are channelled into a field whose logic no longer guarantees the outcomes it promises.

The second objective investigated learner strategies to overcome institutional and industry-level barriers. Informal learning networks, particularly peer support, family-arranged attachments, and classroom-based learning, emerged as dominant strategies. These reflect Evans' (2007) theory of bounded agency, wherein individuals act purposefully but within restrictive conditions that shape and limit their choices. From a theoretical perspective, these behaviours are manifestations of habitus adjustment, where learners recalibrate their expectations and strategies in response to structural limitations.

The third objective examined gender disparities in the navigation of dual systems. Female learners expressed lower confidence in career planning and reported significantly fewer self-arranged attachments. This confirms the intersectionality of agency, gender, and vocational identity formation. Structural limitations are compounded for women by their exclusion from male-dominated spaces, particularly construction sites. Drawing on Bourdieu, these findings can be interpreted as an effect of gendered symbolic capital, where women's labour is less recognised, less supported, and less socially valued within the vocational field. Their constrained agency manifests in strategic withdrawal from site exposure and greater reliance on safer, classroom-based learning modalities.

6.3 Integration With Existing Literature

These findings align with existing critiques of dual TVET transfers to sub-Saharan Africa. Scholars such as King and Palmer (2014) and Walther (2008) have emphasised that policy borrowing, particularly of the dual model, often results in systems that are structurally hybrid but functionally incoherent. This study contributes by showing how these gaps play out at the learner level. It demonstrates that learners, rather than being failed by the system in a passive sense, are forced into compensatory behaviours that reconfigure the original intent of duality.

The critical role of peer learning confirms Billett's (2011) argument that affordances for learning must be matched by learner engagement. In a system where formal affordances (e.g. instructor feedback, site mentorship) are absent, learners repurpose peer support into a structured learning mechanism. This adaptation suggests that agency is both individual and collective, emerging from shared experiences of institutional failure. Moreover, the findings extend Bourdieu's (1986) theory by illustrating that vocational learning operates within a field saturated with power asymmetries: between genders, between institutions and learners, and between certification and actual competence.

Female learners' marginalisation in site-based training continues to mirror systemic gendered inequalities documented across African TVET systems. As Bray-Collins et al. (2022) highlight, training environments often fail to accommodate or empower women, particularly in male-dominated trades such as construction. Similarly, Alla-Mensah and McGrath (2025) show that access to hands-on learning and mentorship remains structurally limited for women, not due to a lack of motivation but because of institutional cultures and practices that reinforce occupational segregation. Bourdieu's (2000) notion of symbolic violence offers a compelling lens here, illustrating how formally inclusive systems may continue to legitimise unequal opportunity structures under the guise of neutrality or merit, thereby reproducing entrenched hierarchies within the training process itself.

6.4 Explaining Unexpected Patterns

One of the most striking findings was the prevalence of high vocational aspirations among learners, despite minimal structural support. More than 70% of respondents envisioned themselves as future entrepreneurs or master craftworkers. This optimism, while commendable, contrasts sharply with the realities of fragmented training. Learners believe in the rules of the vocational field even when the system no longer functions to deliver its promises. They remain committed to the field because

they lack viable alternatives or because the symbolic capital of being trained still carries social weight.

However, this illusion is not evenly distributed. Male learners expressed stronger confidence in self-navigation, while female learners revealed more hesitation, weaker social networks, and limited access to mentorship. These patterns suggest that habitus is gendered, shaped by accumulated experiences of marginalisation. Female learners often enter the vocational field with adaptation strategies, which are often invisible to the system, further marginalising them within institutional structures.

6.5 Practical and Managerial Implications

The empirical data presented in this study underscores a recurring paradox in international TVET reform: While donor-funded dTVET models often introduce structural innovations and temporary improvements, their long-term impact is undermined by systemic neglect, particularly once external funding recedes. The Ghanaian case examined here, centred on a public technical institute originally established through German bilateral cooperation, exemplifies a broader regional trend. Despite formal references to dual training and past investments in infrastructure, the training system no longer reflects the principles of balanced school-workplace integration. The outcome is not a hybridised model, but a fragmented one.

First, there is a need to reconceptualise dual training not merely as a structural model to be transferred but as an ecosystem requiring sustained institutional, industry, and learner-level support. Reliance on employer participation cannot be assumed in post-donor contexts; hence, alternative pathways should be explored.

Second, the findings underscore the need for gender-responsive policies in dual training, particularly in male-dominated sectors. Institutions must go beyond enrolment parity and address experiential inequities in site exposure, mentorship, and workplace integration. Targeted mentorship schemes, flexible placement models, and gender-aware career orientation programmes could help mitigate these disparities.

Third, the strong reliance on peer networks for practical learning points to the potential of formalising peer mentoring within the curriculum. Rather than viewing these strategies as bridging-the-gap solutions, institutions could leverage them as pedagogical resources that reflect the lived realities of learners.

6.6 Limitations

While the study provides robust empirical insights, several limitations must be acknowledged. The use of convenience sampling restricts the generalisability of findings beyond the surveyed institution. Additionally, self-reported data may be subject to bias, including social desirability or strategic exaggeration, especially in aspirational responses. The exclusion of industry or institutional actors from the dataset limits the triangulation of findings, and the absence of longitudinal data restricts the ability to assess the long-term outcomes of learners' adaptive strategies.

The analysis of gender, while illuminating, was also constrained by a smaller proportion of female respondents, which may have limited the statistical power of gender-disaggregated

interpretations. Lastly, the absence of qualitative follow-up interviews due to timetable constraints means that the nuances behind learners' strategies could not be explored in greater depth.

7 Conclusion

The agency of learners becomes both a coping mechanism and a form of resistance. Learners bridge the gap between intention and reality through informal placements, peer collaboration, and self-organised practice. However, as shown in this and comparable cases, such agency is bounded by structural limitations. Without systemic recognition and institutional support, informal adaptations remain invisible and unrewarded. Thus, the Ghanaian case is not unique but illustrative. It sheds light on the micro-level consequences of macro-level policy logics. Learners in donor-dependent systems shoulder the burden of systemic contradictions, often without the resources or recognition required to fully succeed. Until post-donor accountability mechanisms are built into the design, evaluation, and adaptation of dTVET systems, the cycle of short-term reform and long-term dysfunction is likely to persist across contexts.

This study opens several avenues for future research. There is a need for longitudinal studies that trace learners beyond the training period to assess whether their coping strategies translate into sustainable employment or entrepreneurship. Such studies could explore how learner agency evolves as institutional memory of the dual system fades. Furthermore, future works should incorporate employer perspectives to better understand why attachment partnerships deteriorate post-donor exit. Comparative studies across different institutions or countries with varying levels of donor dependency could also yield insights into which contextual factors mediate successful adaptation.

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References

- Ababio, K. A., Adarkwa, S. A., Owusu, F. K., Dankwa, R., Serwah, A., & Adjei, S. S. (2024). TVET graduates' tracer study and employability in Ghana. *African Journal of Applied Research*, 10(2), 456–473. <https://doi.org/10.26437/ajar>
- African Center for Economic Transformation (ACET). (2025). Africa must rethink TVET to drive jobs and growth. <https://acetforafrica.org/news-and-media/press-releases/millions-of-young-africans-risk-missing-out-on-decent-work-without-tvet-reform/>
- Allais, S. (2014). Selling out education: National qualifications frameworks and the neglect of

- knowledge. SensePublishers. <https://doi.org/10.1007/978-94-6209-578-6>
- Allais, S. (2025). Disconnection or delusion? Complexities of employer engagement in TVET. *Journal of Vocational Education & Training*. <https://doi.org/10.1080/13639080.2025.2562507>
- Alla-Mensah, J., & McGrath, S. (2025). Barriers to the participation of women in non-traditional skilled trades: The perspectives of women in the automotive trade in Ghana. *International Journal of Training Research*, 1–20. <https://doi.org/10.1080/14480220.2025.2483198>
- Apra, C., & Sappa, V. (2014). Kongruenzen und Divergenzen des Lernens in Schule und Betrieb: Die Perspektive von Auszubildenden in der schweizerischen Berufsbildung. *Berufs- und Wirtschaftspädagogik - online*, 26. http://www.bwpat.de/ausgabe26/aprea_sappa_bwpat26.pdf
- Araki, S., & Kariya, T. (2022). Credential inflation and dec credentialization: Re-examining the mechanism of the devaluation of degrees. *European Sociological Review*, 38(6), 904–918. <https://doi.org/10.1093/esr/jcaco04>
- Auffray, C., & Fu, X. (2015). Chinese MNEs and managerial knowledge transfer in Africa: The case of the construction sector in Ghana. *Journal of Chinese Economic and Business Studies*, 13(4), 285–310. <https://doi.org/10.1080/14765284.2015.1092415>
- Bashir, S., Lockheed, M., Ninan, E., & Tan, J.-P. (2018). Facing forward: Schooling for learning in africa. World Bank. <https://doi.org/10.1596/978-1-4648-1260-6>
- Billett, S. (2011). *Vocational education: Purposes, traditions and prospects*. Springer Netherlands. <https://doi.org/10.1007/978-94-007-1954-5>
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood Press.
- Bourdieu, P., Nice, R., & Bourdieu, P. (2000). *Pascalian meditations*. Stanford University Press.
- Bray-Collins, E., Andrade, N., & Wanjiru, C. (2022). Gender and TVET in Africa: A review of the literature on gender issues in Africa’s TVET sector. *Futures of Education, Culture and Nature - Learning to Become*, 1, 151–171. <https://doi.org/10.7146/fecun.vi.130245>
- Busemeyer, M. R., & Trampusch, C. (2011). Review article: Comparative political science and the study of education. *British Journal of Political Science*, 41(2), 413–443. <https://doi.org/10.1017/S0007123410000517>
- Civile, C., Kinsella, G. K., & Gormley, C. (2025). Soft skills and employability signalling across degree qualifications. *Higher Education, Skills and Work-Based Learning*. [Ahead of print]
- Commission for Technical and Vocational Education and Training (CTVET). (2023). *Ghana TVET Report: Second Edition 2023*. <https://ctvet.gov.gh/wp-content/uploads/2024/04/GHANA-TVET-REPORT-SECOND-EDITION-2023.pdf>
- Donkor, F., Nsoh, S. N., & Mitchual, S. J. (2009). Assessment of supervised industrial attachment of a technical and vocational teacher education program in Ghana. *Asia-Pacific Journal of Cooperative Education*, 10(1), 1–17.
- Euler, D. (2013). *Germany’s dual vocational training system: A model for other countries?* Bertelsmann Stiftung.
- Euler, D. (2023). *Roadmap to high-quality dual vocational education and training*. <https://doi.org/10.11586/2023061>
- Evans, K. (2002). Taking control of their lives? Agency in young adult transitions in England and the new Germany. *Journal of Youth Studies*, 5(3), 245–269. <https://doi.org/10.1080/1367626022000005965>
- Evans, K. (2007). Concepts of bounded agency in education, work, and the personal lives of young adults. *International Journal of Psychology*, 42(2), 85–93. <https://doi.org/10.1080/00207590600991237>
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219–245. <https://doi.org/10.1177/1077800405284363>
- Fu, N., Flood, P. C., Bosak, J., Morris, T., & O’Regan, P. (2013). *Innovations in workforce training programs in Ghana using public-private partnerships*. Harvard Ash Center.

- German Office for International Cooperation in Vocational Education and Training (GOVET). (2025). Advice on benefits of dual education in Ghana. <https://www.govet.international/en/155925.php>
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). (2025). Fit for the labour market – in our partner countries and Germany. <https://www.giz.de/en/newsroom/stories/fit-labour-market-our-partner-countries-and-germany>
- Government of Ghana. (2020). Education Regulatory Bodies Act, 2020 (Act 1023). <https://ctvet.gov.gh/wp-content/uploads/2021/06/Education-Regulatory-Bodies-Act-2020.pdf>
- International Public Policy Group (IPPG) Africa. (2017). Report on Ghana-German cooperation on TVET. <http://www.ippgafrica.org/wp-content/uploads/2017/07/Report-Ghana-German-Cooperation-on-TVET.pdf>
- Joseph, C., & Leyaro, V. (2019). Gender differential effects of technical and vocational training: Empirical evidence for Tanzania (Working Paper No. 19/04). CREDIT Research Paper. <https://www.econstor.eu/handle/10419/210855>
- King, K., & Palmer, R. (2010). Planning for technical and vocational skills development. Fundamentals of Educational Planning Series, No. 94. UNESCO–IIEP. <https://unesdoc.unesco.org/ark:/48223/pf0000189530>
- King, K., & Palmer, R. (2014). Post-2015 and the global governance of education and training (NORRAG Working Paper No. 7). NORRAG. <https://resources.norrag.org/resource/download/14/66>
- Langthaler, M. (2015). The transfer of the Austrian dual system of vocational education to transition and developing countries: An analysis from a developmental perspective (Working Paper 56). Austrian Foundation for Development Research (ÖFSE).
- Laryea, S. (2010). Challenges and opportunities facing contractors in Ghana. In Proceedings of the West Africa Built Environment Research (WABER) Conference (pp. 215–226). https://centaur.reading.ac.uk/8192/1/Proceedings_of_WABER_2010_Conference_edited_by_S_Laryea,_R_Leiringer_and_W_Hughes.pdf
- Li, J., & Pilz, M. (2023). International transfer of vocational education and training: A literature review. *Journal of Vocational Education & Training*, 75(2), 185–218. <https://doi.org/10.1080/13636820.2020.1847566>
- Madambi, S. (2025). From theory to practice: TVET college students' challenges in search of experiential training. *International Journal of Studies in Inclusive Education*, 2(2), Article 1881. <https://doi.org/10.38140/ijisie.v2i2.1881>
- Mahlangu, S. M., & Mtshali, T. I. (2024). A deflating quality TVET education in Gauteng Technical, Vocational Education and Training Colleges. *International Journal of Research in Business and Social Science*, 13(3), 441–447. <https://doi.org/10.20525/ijrbs.v13i3.3224>
- Majola, E. (2025). National Certificate Vocational graduates and barriers to progression in South African Technical Vocational Education and Training. *The Journal for Transdisciplinary Research in Southern Africa*, 10(1), Article 579. <https://doi.org/10.4102/the.v10i0.579>
- McGrath, S. (2012). Vocational education and training for development: A policy in need of a theory? *International Journal of Educational Development*, 32(5), 623–631. <https://doi.org/10.1016/j.ijedudev.2011.12.001>
- Mesuwini, J., Motheogane, M., Molele, M., & Mabusela, M. S. (2024). Work-integrated learning as a pedagogical tool to integrate theory and practice for TVET graduates. In *Engineering Education in South Africa: Practice, Challenges and Prospects* (pp. 117–136). Springer. https://doi.org/10.1007/978-3-031-58206-6_7
- Northrup, H. R. (1992). The “Helper” controversy in the construction industry. *Journal of Labor Research*, 13(1), 51–66. <https://doi.org/10.1007/BF02685531>

- OECD. (2018). *The future of education and skills: Education 2030* (OECD Education Policy Perspectives No. 98). <https://doi.org/10.1787/54ac7020-en>
- Owusu-Agyeman, Y. (2017). Expanding the frontiers of national qualifications frameworks through lifelong learning. *International Review of Education*, 63(4), 527–546. <https://doi.org/10.1007/s11159-017-9661-2>
- Owusu-Agyeman, Y., Brenya, B., & Kwapong, O. A. T. F. (2025). Teacher perceptions about the reputation of technical and vocational education and training in Ghana. *Education + Training*, 67(3), 361–388. <https://doi.org/10.1108/et-10-2023-0446>
- Palmer, R. (2007). Skills for work? From skills development to decent livelihoods in Ghana's rural informal economy. *International Journal of Educational Development*, 27(4), 397–420. <https://doi.org/10.1016/j.ijedudev.2006.10.003>
- Patzina, A., & Wydra-Somaggio, G. (2020). Early careers of dropouts from vocational training: Signals, human capital formation, and training firms. *European Sociological Review*, 36(5), 741–759. <https://doi.org/10.1093/esr/jcaa011>
- Phillips, D., & Ochs, K. (2004). Researching policy borrowing: Some methodological challenges in comparative education. *British Educational Research Journal*, 30(6), 773–784. <https://doi.org/10.1080/0141192042000279495>
- Pilz, M. (2016). Typologies in comparative vocational education: Existing models and a new approach. *Vocations and Learning*, 9(3), 295–314. <https://doi.org/10.1007/s12186-016-9154-7>
- Powell, L., & McGrath, S. (2019). *Skills for human development: Transforming vocational education and training*. Routledge.
- Spence, M. (1981). Signaling, screening, and information. In S. Rosen (Ed.), *Studies in labor markets* (pp. 319–357). University of Chicago Press.
- Steiner-Khamsi, G. (2014). Cross-national policy borrowing: Understanding reception and translation. *Asia Pacific Journal of Education*, 34(2), 153–167. <https://doi.org/10.1080/02188791.2013.875649>
- Trampusch, C. (2010). Employers, the state and the politics of institutional change: Vocational education and training in Austria, Germany and Switzerland. *European Journal of Political Research*, 49(4), 545–573. <https://doi.org/10.1111/j.1475-6765.2009.01909.x>
- UNICEF Ghana. (2024). Ghana's TVET sector: A new report spotlights key challenges. <https://www.unicef.org/ghana/press-releases/ghanas-tvet-sector-new-report-spotlights-key-challenges>
- Walther, R. (2008). Nouvelles formes d'apprentissage en Afrique de l'Ouest: Vers une meilleure insertion professionnelle des jeunes. <https://www.afd.fr/fr/ressources/nouvelles-formes-dapprentissage-en-afrique-de-louest>
- Windapo, A. O. (2016). Examination of the construction skills gap and its impact on the South African construction industry. *Journal of Construction Project Management and Innovation*, 6(2), 1475–1490.
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.

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