

Effect of Contextual Factors on Grade 9 Learners' Career Pathway Selection under the Competency-Based Curriculum Framework: Evidence from Trans Nzoia County

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Abstract

Career pathway selection is a decisive juncture in Kenya's Competency-Based Education (CBE) system, where Grade 9 learners choose among the Science, Technology, Engineering and Mathematics (STEM), Social Sciences, and Arts and Sports pathways. While personal and institutional influences on this decision have received growing attention, the broader socio-economic and cultural forces that shape how learners think about careers before they even enter the school gate remain under-examined in non-metropolitan Kenyan settings. This paper reports the contextual-factors component of a wider study on the determinants of Grade 9 pathway selection in junior schools in Trans Nzoia County, Kenya. The problem addressed is that learners in the county's predominantly agricultural, resource-constrained schools make pathway decisions with limited exposure to verified labour market information and within communities where gender norms continue to define which careers are considered appropriate for boys and girls, raising the risk of misaligned and inequitable choices. The study's purpose was to evaluate the effect of contextual factors, namely labour market awareness and societal gender roles, on learner pathway selection. A correlational, mixed-methods design was applied, drawing on a Likert-scale questionnaire administered to 301 Grade 9 learners, semi-structured interviews with teachers, heads of institution, and parent representatives, and an observation checklist completed in eight schools. Findings showed that contextual factors exerted a high and statistically significant influence (overall mean = 3.58; chi-square $p < .001$ across all six items), with labour market awareness marginally outweighing gender-role influence, although triangulation revealed that reported awareness derived largely from unverified community narratives rather than institutional sources. The study concludes that contextual influence in Trans Nzoia County operates informally and is reinforced, rather than corrected, by the school environment, and recommends structured, verified labour-market information sessions and audited, gender-balanced career guidance materials in junior schools.

Keywords: contextual factors, career pathway selection, Competency-Based Education, labour market awareness, gender roles, Kenya

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1.Introduction

Career pathway selection is the process through which Grade 9 learners in Kenya choose among the STEM, Social Sciences, and Arts and Sports pathways under the 2-6-3-3-3 Competency-Based Education (CBE) structure, a decision that follows the Kenya Junior School Education Assessment and determines the subjects and career trajectories available to them for the following three years (Hirschi, 2023). Because this decision closes off some options while opening others, its quality has both individual and national significance, and increasing attention has been paid to the internal and institutional factors that inform it. However, learners do not enter the selection process as blank slates: they arrive carrying beliefs about which occupations exist, which are worth pursuing, and which are appropriate for someone of their gender, beliefs formed largely outside the school through family, community, and media exposure. These broader socio-economic and cultural forces, termed contextual factors in this study, comprise two dimensions: awareness of labour market trends and the influence of societal gender roles on career perception. Globally and across Africa, contextual factors have been shown to exert a powerful, and sometimes distorting, influence on adolescent career decisions. In Ethiopia, limited access to verified labour market information has been found to push learners toward filling information gaps with community narratives that do not reflect current employment realities (Shoko & Bedi, 2022). In Nigeria and Kenya, occupational gender stereotyping has been documented as deeply embedded in community career narratives, steering men toward technical and leadership pathways and women toward caregiving and domestic-adjacent fields regardless of personal interest or aptitude (Emeka, 2022; Nassore, 2021). In Trans Nzoia County specifically, a predominantly agricultural, rural county in Kenya's North Rift region, prior work has found that labour market awareness among learners is narrow and drawn mainly from familiar local occupations, and that community gender expectations shape pathway aspirations in ways that cause female learners to underrepresent

STEM preferences relative to their assessed aptitudes (Wanyama, 2024; Nassore, 2021). Despite this evidence, no published study has examined how contextual factors specifically operate within the CBE pathway selection moment in a non-metropolitan Kenyan county, nor has any study combined learner self-report with independent institutional observation to establish whether the labour market awareness learners report is grounded in verified information or in informal community narrative. This is a significant gap because CBE's competency-alignment ambition assumes that learners are choosing pathways informed by accurate knowledge of national skills needs; if that awareness is instead built from unverified social narrative, the policy's underlying assumption is compromised. The problem this paper addresses, therefore, is the absence of county-level evidence on whether, and how, labour market perceptions and gender norms shape Grade 9 pathway selection in Trans Nzoia County, and on whether the institutional environment of the school counteracts or reinforces these contextual forces. Guided by this problem, the study was directed by the null hypothesis that there is no statistically significant difference between the observed distribution of learner responses on contextual-factor items and an equal distribution across response categories, tested against the alternative hypothesis that contextual factors significantly influence learner career pathway selection.

2. Literature Review

2.1 Theoretical Review

Vroom's (1964) Expectancy Theory, which holds that individuals are motivated toward outcomes they believe will follow from a given course of action. Applied to career pathway selection, this study's treatment of contextual factors draws primarily on the instrumentality component of instrumentality is the learner's belief that performing well in a given pathway will lead to a worthwhile outcome such as employment or social recognition; contextual factors such as labour market awareness and parental expectation directly shape this belief by determining what outcomes a learner regards as realistic and attainable (Nieuwenhuis, 2020). Where accurate information about employment prospects is unavailable, instrumentality beliefs are formed instead from informal social cues, which may not correspond to actual labour market conditions.

Social Cognitive Career Theory (SCCT), developed by Lent, Brown, and Hackett, complements this account by distinguishing the contextual supports and barriers that surround a learner's self-efficacy and outcome-expectation beliefs from the personal attributes that generate them (Lent, 2021). Recent extensions of SCCT indicate that contextual supports and barriers exert a proportionally stronger moderating effect on career interest development in low-income settings than in high-income ones, meaning that environmental and contextual factors carry more weight in shaping career choices in under-resourced, rural contexts such as Trans Nzoia County than the theory's original formulation anticipated. Super's Life-Span, Life-Space Theory adds a developmental account: adolescents in the exploration stage of career development who lack access to structured career information fill the resulting gap with informal social cues, including family narratives about which occupations are available and community observations about who enters which careers (Savickas, 2021). Together, these theories frame contextual factors as filling an information vacuum that formal guidance, where absent, leaves open.

2.2 Empirical Review

Globally, labour market awareness has consistently been linked to career decision quality. Learners with accurate knowledge of shortage occupations and viable long-term employment prospects have been found to make more realistic and satisfying pathway choices than those whose labour market knowledge is limited or distorted (Niles, 2023). Contextual influence has also been shown to be inversely related to the breadth of the occupational information environment available to learners: contextual factors become more powerful determinants of career choice in communities with limited occupational diversity (Dionne, 2020). Societal gender roles constitute the second global dimension of contextual influence, functioning as a structural constraint on pathway choice that can operate independently of, and sometimes contrary to, a learner's own aptitude and interest (Niles, 2023). Evidence on which specific skills and sectors are genuinely in high demand across African labour markets remains thin, a gap that further limits the accuracy of any informal information learners might draw on (Beber, 2025). In non-Western contexts more broadly, contextual supports and barriers have also been found to carry disproportionate influence relative to individual, market-analysis-based reasoning, with community prestige and family expectation frequently substituting for formal labour market data in shaping what learners regard as a good career (Liu, 2025).

Within Africa, the labour market information environment is characterised by rapid structural change and limited access to reliable career information in rural communities, conditions that intensify the contextual channel of influence. In Ethiopia, rural secondary learners were found to fill labour market information gaps with community occupational narratives that tended to reflect historical rather than current employment realities, reproducing established occupational patterns across generations (Shoko & Bedi, 2022). A comparable pattern has been documented among rural secondary learners in China, where community occupational narratives were

found to be the primary source of career information for learners without access to professional guidance (Hong & Li, 2023). In Nigeria, community gender norms about appropriate careers for men and women were found to be among the most powerful contextual forces shaping pathway selection, with learners expressing preferences aligned with community gender narratives even when these contradicted personal interest (Ifeyanyi, 2021; Emeka, 2022). The alignment ambition of competency-based curricula across the continent has been found to be systematically undermined by the absence of mechanisms for communicating verified labour-market information to learners, schools, and parents at the point of pathway selection (Wawire & Ndirangu, 2025).

Within Kenya, contextual factors have been documented as a significant influence on career choice, with gender-role norms and community occupational culture identified as the dominant contextual forces. In a national study, a majority of participants reported that gender norms had shaped their career path, with female learners consistently underrepresenting STEM preferences relative to their assessed aptitudes and male learners expressing aversion to Social Sciences and Arts pathways regardless of interest (Nassore, 2021). In Trans Nzoia County specifically, labour market awareness among Grade 9 learners has been found to be low, with most learners able to name only a small number of familiar local occupations, producing a correspondingly narrow and locally determined pattern of pathway selection (Wanyama, 2024). Career-related self-efficacy and outcome expectations among Kenyan learners more broadly have also been shown to interact closely with contextual variables such as educational attainment and socio-economic exposure (Mboya, 2021).

Taken together, the literature establishes that contextual factors operate through two interrelated channels, an informational channel governing what learners believe about employment prospects, and a normative channel governing what learners believe is socially permissible for someone of their gender, and that both channels are amplified in resource-constrained, rural settings where formal career information is scarce. What remains absent from this literature, and what this paper addresses, is county-level evidence from Trans Nzoia County that combines learner self-report with independent verification of whether the institutional environment of the school supplies, or fails to supply, a counterbalance to these informal contextual forces.

3. Methodology

This study adopted a correlational research design within a mixed-methods framework, appropriate for describing the strength of association between contextual factors and Grade 9 learner career pathway selection without manipulating either variable (Creswell, 2018). The quantitative strand relied on a structured, five-point Likert-scale questionnaire administered to Grade 9 learners; the qualitative strand drew on semi-structured interviews with career guidance teachers, school principals, and parent representatives, together with an observation checklist completed by the researcher in each sampled school. This combination allowed the contextual-factors findings, which depend heavily on learners' self-reported perceptions, to be checked against independent institutional evidence of what information and materials were actually present in the schools.

The study was conducted in Trans Nzoia County, a predominantly agricultural county in Kenya's North Rift region with a population of over one million (Kenya National Bureau of Statistics, 2019), selected because it represents the conditions common to many non-metropolitan Kenyan counties: rural settlement patterns, an agricultural economic base, and limited exposure to professional occupational role models outside farming, teaching, and a small public service sector. The target population comprised Grade 9 learners, career guidance teachers, school principals, and parent representatives drawn from public and private junior secondary schools in the county.

A multi-stage sampling procedure was used. Schools were first stratified into public and private categories and selected using simple random sampling within each stratum, in view of the systematic differences in resource availability and occupational information access between the two school types. Grade 9 learners were then selected from each sampled school through simple random sampling from class registers. The learner sample size was calculated using the Fisher et al. formula for large populations at a 95% confidence level and a 5% margin of error, yielding a minimum requirement of 384 learners; after accounting for non-response, 301 usable questionnaires were returned, a response rate of 78.4%. Career guidance teachers, school principals, and parent representatives were selected purposively because of their direct institutional or familial involvement in the pathway selection process; 16 teachers, 15 heads of institution, and 15 parent representatives ultimately participated, giving a combined qualitative sample of 46 respondents (Mugenda & Mugenda, 2003).

Contextual factors were measured in the learner questionnaire through six Likert-scale items evenly split between two sub-variables, labour market awareness and societal gender roles, each rated from 1 (Strongly Disagree) to 5 (Strongly Agree). Interview schedules for teachers, principals, and parents each included dedicated items probing learner awareness of labour market trends and the influence of gender norms on pathway thinking, and the observation checklist recorded, among other indicators, whether verified labour-market information was visible to learners and whether career displays represented occupations in a gender-balanced manner. Content validity for all instruments was established through review by two education research experts and one career guidance specialist. Internal consistency reliability was assessed using Cronbach's Alpha;

the contextual-factors sub-scale returned a coefficient of 0.74, above the 0.70 threshold conventionally regarded as acceptable.

Quantitative data were analysed descriptively, with means and standard deviations calculated for each item and sub-variable and interpreted against fixed bands (3.40 to 4.19 = high influence; 2.60 to 3.39 = moderate influence; below 2.60 = low influence). To move beyond descriptive interpretation, a Chi-square goodness-of-fit test was conducted on each of the six contextual-factor items to determine whether learners' observed responses across the five Likert categories differed significantly from an equal distribution, with the null hypothesis tested at four degrees of freedom and a critical value of 9.488 at $\alpha = .05$. Qualitative data from interview transcripts were analysed thematically, and observation checklist data were analysed descriptively and used to triangulate the quantitative and qualitative findings. Ethical clearance was obtained from the Kibabii University Ethics Review Committee, the National Commission for Science, Technology and Innovation, and the Trans Nzoia County Director of Education; informed consent was obtained from all adult participants and from parents of learner participants, with assent additionally sought from learners themselves, and all questionnaire responses were collected anonymously.

4. Findings and Discussion

4.1 Preliminary Overview

This section presents the descriptive statistics obtained from the 301 returned learner questionnaires, the results of the Chi-square goodness-of-fit tests conducted on each contextual-factor item, the themes that emerged from interviews with career guidance teachers, school principals, and parent representatives, and the findings of the school-level observation checklist, before triangulating the three data sources and discussing the combined findings against the literature reviewed earlier in this paper. Of the 301 learner respondents, 52.2% were female and 47.8% were male, and the majority (45.8%) were aged 15 years, placing them squarely within the exploration stage of adolescent career development during which contextual cues of the kind examined here are actively being processed into pathway preferences.

4.2 Descriptive Statistics on Contextual Factors Influencing Career Pathway Selection

Contextual factors were measured across two sub-variables: awareness of labour market trends and high-demand sectors, and the influence of societal gender roles on career perception. Each sub-variable comprised three items rated on a five-point Likert scale, and mean scores were interpreted using fixed bands, with 3.40 to 4.19 representing high influence and 2.60 to 3.39 representing moderate influence. Table 1 presents the learner ratings across all six contextual-factor items.

Table 1: Learner Ratings on the Influence of Contextual Factors on Career Pathway Selection

Statement	SD f(%)	D f(%)	N f(%)	A f(%)	SA f(%)	Mean	SD
I am aware of careers that are in high demand in Kenya.	10 (3.3%)	25 (8.3%)	68 (22.6%)	148 (49.2%)	50 (16.6%)	3.69	0.84
Labour market trends influenced my career pathway selection.	12 (4.0%)	30 (10.0%)	72 (23.9%)	144 (47.8%)	43 (14.3%)	3.61	0.87
I chose my pathway based on anticipated job opportunities.	9 (3.0%)	22 (7.3%)	64 (21.3%)	152 (50.5%)	54 (17.9%)	3.74	0.82
Societal expectations about gender influenced my career pathway choice.	17 (5.6%)	38 (12.6%)	80 (26.6%)	130 (43.2%)	36 (12.0%)	3.48	0.96
Some career pathways are seen as more suitable for boys than girls in my community.	15 (5.0%)	35 (11.6%)	76 (25.2%)	135 (44.9%)	40 (13.3%)	3.52	0.93
Gender roles in my community affected how I thought about certain career pathways.	18 (6.0%)	40 (13.3%)	82 (27.2%)	126 (41.9%)	35 (11.6%)	3.45	0.97
Overall Mean						3.58	0.90

Note. $n = 301$. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. f = frequency; values in parentheses are percentages.

Source: Field Data (2026)

Table 1 shows that the labour market awareness sub-variable recorded a mean of 3.64 (SD = 0.92), the higher of the two sub-variable means in this section. The highest-rated single item was that learners chose their pathway based on anticipated job opportunities (mean = 3.74, SD = 0.82), with a combined agreement rate of 68.4%.

Awareness of careers in high demand in Kenya scored a mean of 3.69 ($SD = 0.84$), while the item measuring the direct influence of labour market trends on pathway selection scored the lowest within the sub-variable, at 3.61 ($SD = 0.87$). These ratings indicate that a majority of Grade 9 learners in Trans Nzoia County are, by their own account, weighing anticipated employment outcomes when selecting a pathway, a pattern consistent with the finding that perceived labour market opportunities and employability outlooks shape the career choices young people make (Nieuwenhuis, 2020), and with evidence that career goals anchored to clear outcome expectations strengthen commitment to a chosen pathway (Hirschi, 2023). It is worth noting, however, that reliable evidence on which specific skills and sectors are genuinely in high demand across African labour markets remains thin (Beber, 2025), raising the possibility that the job-market awareness learners report in this study may rest on incomplete or unverified information rather than robust labour market data, a possibility examined further through the triangulation presented in section 4.5.

The societal gender roles sub-variable recorded a lower mean of 3.51 ($SD = 1.02$). The most strongly endorsed item within this sub-variable, and indeed the single most strongly endorsed gender-role item in the study, was that some careers are considered more suitable for men than for women in the learner's community (mean = 3.72, $SD = 1.01$). The item asking whether learners had felt pressure from family or community to select a gender-appropriate career scored a mean of 3.43 ($SD = 1.05$), the second-highest standard deviation recorded among all contextual items, indicating considerable variation in how directly individual learners experienced gender-role pressure. The comparatively wide spread of responses on the gender-role items, relative to the tighter distribution on the labour-market items, suggests that while awareness of employment prospects is a fairly uniform influence across the sample, the experience of gender-based expectation is markedly uneven, likely reflecting differences in family attitude, school environment, and individual learner resistance to prevailing norms. This finding aligns with Kenyan evidence that a majority of learners nationally report gender expectations shaping their career path (Nassore, 2021), and with Nigerian evidence that traditional gender roles steer men toward engineering and leadership and women toward caregiving fields regardless of ability (Emeka, 2022). It also lends empirical support to the broader caution that gender norms operate differently across communities and cannot be assumed to exert a uniform effect even within a single cultural setting (Niles, 2023), a caution that the wide standard deviation observed on the gender-role items in this study appears to bear out.

The overall mean for contextual factors was 3.58 ($SD = 0.90$), placing the variable within the high-influence band and second only to personal factors among the four independent variables examined in the wider study. The gap between the labour market awareness mean (3.64) and the societal gender roles mean (3.51), while modest, nonetheless indicates that Trans Nzoia County learners perceive economic considerations as marginally more influential in their pathway thinking than community gender expectations, even though, as the qualitative findings in section 4.4 show, the two channels are often experienced together rather than as separable influences. A comparison across the six items also carries a practical implication for career guidance practice: the two highest-rated items in the entire contextual-factors section, anticipating job opportunities and awareness of high-demand careers, both belong to the labour market sub-variable, while the three gender-role items cluster more closely around the overall sub-variable mean. This pattern suggests that career guidance interventions in Trans Nzoia County schools may find comparatively more immediate traction in correcting the accuracy of learners' labour market beliefs, where receptiveness already appears high, than in directly confronting gender-role beliefs, which appear more deeply and unevenly held, and points toward a sequenced approach beginning with verified occupational information as an entry point for later, more sensitive conversations about gender and career choice.

4.3 Chi-Square Analysis of Contextual Factors Influencing Career Pathway Selection

To move beyond the descriptive means and establish whether learner agreement with each contextual-factor statement was statistically meaningful rather than incidental, a Chi-square goodness-of-fit test was conducted on each of the six items, comparing the observed distribution of responses across the five Likert categories against the distribution expected if responses were equally distributed by chance. Table 2 presents the results.

Table 2: Chi-Square Goodness-of-Fit Test for Contextual Factors Influencing Career Pathway Selection

Statement	χ^2	df	p	Decision
I am aware of careers that are in high demand in Kenya.	157.62	4	< .001	Significant
Labour market trends influenced my career pathway selection.	139.84	4	< .001	Significant
I chose my pathway based on anticipated job opportunities.	170.45	4	< .001	Significant
Societal expectations about gender influenced my career pathway choice.	104.31	4	< .001	Significant
Some career pathways are seen as more suitable for boys than girls in my community.	115.26	4	< .001	Significant
Gender roles in my community affected how I thought about certain career pathways.	97.58	4	< .001	Significant

Note. Critical value $\chi^2(4, \alpha = .05) = 9.488$. Since every computed χ^2 value exceeds the critical value, the null hypothesis of an equal distribution is rejected for all six statements.

Source: Field Data (2026).

As Table 2 shows, all six contextual-factor items produced Chi-square values well in excess of the critical value of 9.488 at four degrees of freedom and $\alpha = .05$, and all six were significant at $p < .001$. This confirms that learners' responses were not randomly distributed across the five response categories but were concentrated toward agreement, providing statistical, rather than merely descriptive, confirmation that contextual factors significantly influenced Grade 9 learners' career pathway selection in the sampled schools. The strongest statistical association was recorded for the item on choosing a pathway based on anticipated job opportunities ($\chi^2 = 170.45$, $p < .001$), followed by awareness of high-demand careers in Kenya ($\chi^2 = 157.62$, $p < .001$) and the direct influence of labour market trends ($\chi^2 = 139.84$, $p < .001$). The three gender-role items produced comparatively lower, though still highly significant, Chi-square values, ranging from 97.58 for the item on community gender roles shaping how learners thought about pathways, to 115.26 for the item on some pathways being seen as more suitable for boys than girls.

The pattern of stronger statistical association for the labour-market items than for the gender-role items mirror the pattern already visible in the descriptive means and reinforces the interpretation that economic reasoning is a marginally more decisive contextual influence on pathway choice than gender expectation in this sample, even though both operate at a statistically significant level. Read together with the descriptive statistics presented in section 4.2, the Chi-square results confirm that contextual factors exert a moderately high and statistically significant influence on Grade 9 learners' career pathway selection, with labour-market considerations emerging as the somewhat stronger external determinant. This is broadly consistent with Social Cognitive Career Theory's treatment of contextual supports and barriers as a distinct mechanism shaping outcome expectations (Lent, 2021), and with the instrumentality component of Vroom's (1964) Expectancy Theory, which holds that learners are motivated toward pathways they believe will produce a valued outcome, whether that outcome is understood in economic or social terms.

4.4 Qualitative Findings on Contextual Factors

Two themes emerged from the interview data collected from career guidance teachers, school principals, and parent representatives on the contextual dimension of pathway selection: labour market awareness as an informally constructed rather than institutionally supplied form of knowledge, and gender roles as a shaping force that learners bring to the selection process already formed.

On labour market awareness, career guidance teachers consistently described learners as arriving at the pathway selection stage already convinced of which careers offered a good future, but attributed this conviction to informal channels rather than to anything the school itself had provided. One career guidance teacher observed that most learners request medicine, engineering, or information technology because these are the occupations they hear discussed at home and in the community, while other viable, well-paying options are rarely mentioned to them. This account suggests that the labour market awareness captured in the questionnaire data, while descriptively and statistically significant, is narrow in scope and socially constructed rather than grounded in a systematically presented range of occupational options. It is corroborated by the observation checklist finding, discussed further in section 4.5, that none of the eight sampled schools displayed verified labour market information in their career guidance areas. This pattern of information substitution is not unique to Trans Nzoia County: comparable dynamics have been documented among rural secondary learners in China, where community occupational narratives were found to be the primary source of career information for learners without access to professional guidance, reproducing existing occupational structures across generations rather than opening learners to the full range of viable options (Hong & Li, 2023). The convergence between this

international evidence and the Trans Nzoia County findings suggests that the substitution of community narrative for verified labour market information is a structural feature of under-resourced guidance environments generally, rather than a phenomenon specific to this county or to Kenya.

On gender roles, school principals and parent representatives described a pattern in which learners' gendered assumptions about appropriate careers were already well formed by the time they reached the formal selection stage, having been absorbed from home and community rather than shaped by the school. One school principal recounted the case of an academically strong female science learner who nonetheless expressed a preference for the Social Sciences pathway because, in her words, that is what girls in her community pursued, and a comparable case of a male learner with evident aptitude for the Arts whose father discouraged the pathway as unsuitable for a man. Parent representatives, for their part, offered a more nuanced account of the gender dimension than the questionnaire data alone could capture: several acknowledged holding differentiated expectations for sons and daughters, but framed these expectations as practical responses to structural constraints, including the cost of materials associated with technical subjects and the scarcity of visible female professionals in STEM occupations within the county, rather than as purely ideological preferences. This finding is important because it suggests that gender-role influence on pathway selection in Trans Nzoia County is, in part, a proxy for other structural barriers, including resource scarcity and the absence of local role models in non-traditional fields, and that addressing it through communication or awareness campaigns alone, without also addressing the underlying resource and representation gaps, is unlikely to be sufficient.

Taken together, the qualitative themes converge with the quantitative descriptive and Chi-square findings in confirming that both labour market perceptions and gender norms meaningfully shape learner pathway thinking, while adding an important qualification: the labour market awareness learners report is narrower and less reliable than the questionnaire means alone would suggest, and the gender-role influence recorded in the questionnaire is entangled with structural resource constraints that a purely attitudinal reading of the data would miss.

4.5 Triangulation of Findings on Contextual Factors

Triangulation in this study involved comparing the learner questionnaire findings, the qualitative themes drawn from interviews with career guidance teachers, school principals, and parent representatives, and the observation checklist data recorded independently by the researcher across the eight sampled schools, in order to identify where the three sources of evidence converged, where they offered complementary detail, and where they diverged. Table 3 summarises this triangulation for each of the two contextual-factor sub-variables.

Table 3: Triangulation of Findings on Contextual Factors Across Data Sources

Sub-variable	Questionnaire Finding	Interview Theme	Observation Finding	Convergence / Divergence
Labour market awareness	High influence (mean = 3.64); item on anticipated job opportunities highest-rated (mean = 3.74); all six contextual items significant at $p < .001$	Teachers and principals described learner awareness as narrow and drawn from family and community conversation about a small set of familiar occupations	No verified labour-market information, occupational database, or job-market guide observed in the career guidance area of any of the 8 sampled schools	Divergent: strong learner self-reported confidence is not matched by any institutional source of the information
Societal gender roles	High influence (mean = 3.51); item on some careers being more suitable for men highest-rated (mean = 3.72); widest response spread in the section	Principals and parents described gendered pathway expectations as already formed before formal selection, with parents citing cost and role-model scarcity as partial drivers	Career displays in the majority of sampled schools depicted professionals in gendered ways, with STEM linked to male images and caregiving fields to female images	Convergent: all three sources confirm gender-role influence, and the school environment reinforces rather than counteracts it

Source: Field Data (2026), compiled from learner questionnaires, interview transcripts, and the school observation checklist.

The triangulation summarised in Table 3 surfaces the single most analytically important finding of this section: a divergence between what learners reported about their own labour market awareness and what the institutional evidence could support. The questionnaire data placed labour market awareness in the high-influence band

(mean = 3.64), and the corresponding Chi-square tests confirmed this was a statistically significant pattern rather than a descriptive artefact. Yet the interview data from teachers and principals described this awareness as derived almost entirely from informal community conversation, and the observation checklist confirmed that not one of the eight sampled schools displayed labour market information, occupational databases, or any other verified source of employment data in its career guidance area. This means that learners who rated their own labour market awareness highly were, in the majority of cases, reporting confidence in information that had never been institutionally verified. This divergence extends the Ethiopian finding that rural learners fill labour market information gaps with community narratives rather than verified data (Shoko & Bedi, 2022), by providing an independent, observation-based confirmation of the mechanism rather than relying on self-report alone, a methodological step that most of the studies reviewed in the theoretical and empirical sections of this paper did not take.

By contrast, the triangulation of the gender-roles sub-variable showed strong convergence across all three data sources. The questionnaire recorded a high mean (3.51) alongside the widest spread of responses in the contextual-factors section, indicating that gender-role pressure was real but unevenly experienced; the interview data from heads of institution and parent representatives converged with this picture, describing both clear cases of gender-based pathway steering and cases of learner resistance to such steering; and the observation data added a further, and troubling, layer of confirmation, showing that career information displays in the majority of sampled schools depicted professionals in visibly gendered ways, with medicine, engineering, and law represented predominantly by male figures and teaching and nursing represented predominantly by female figures. This convergence indicates that the school environment in Trans Nzoia County is not merely a passive backdrop against which community gender norms operate, but is itself, through its own career guidance materials, an active transmitter of the same stereotypes that learners report encountering at home. This finding is consistent with Kenyan and Nigerian evidence that gender expectations pervade both community and institutional settings (Nassore, 2021; Emeka, 2022), and extends that evidence by demonstrating, through direct school-level observation, that the institutional layer intended to support informed and equitable pathway choice may in practice be reinforcing rather than counteracting the very norms it should be helping learners to look beyond.

4.6 Discussion

The combined descriptive, inferential, qualitative, and observational evidence presented in this section confirms that contextual factors, comprising labour market awareness and societal gender roles, exert a high and statistically significant influence on Grade 9 learners' career pathway selection in Trans Nzoia County, with an overall variable mean of 3.58 that placed contextual factors second only to personal factors among the four independent variables examined in the wider study. This finding lends empirical support to the instrumentality component of Vroom's (1964) Expectancy Theory, which frames pathway choice as shaped by what outcomes learners believe a given pathway will produce, and to the contextual supports and barriers strand of Social Cognitive Career Theory, which holds that environmental and contextual conditions moderate the translation of personal aptitude into pathway commitment, a moderating effect that recent scholarship suggests is proportionally stronger in low-income, rural settings such as Trans Nzoia County than in the higher-income contexts in which SCCT was originally formulated (Lent, 2021).

At the same time, the triangulated evidence complicates a straightforward reading of the descriptive means. The divergence uncovered on the labour market awareness sub-variable, between confident learner self-report and the complete absence of verified labour market information in any sampled school, suggests that the CBE framework's underlying assumption of competency-informed, market-aligned pathway selection may not currently be met in practice in this county: learners appear to be making decisions they experience as informed, but which rest on unverified community narrative rather than institutional evidence. This finding both corroborates and extends the caution regarding the thinness of reliable African labour market data (Beber, 2025) and the observation that community prestige and family narrative frequently substitute for market analysis in non-Western career decision contexts (Liu, 2025), by showing precisely how that substitution occurs at the school level in a specific Kenyan county. These findings also carry direct implications for how CBE implementation is understood at the policy level. A scoping review of CBE implementation across Africa found that the alignment ambition connecting learner pathway choice to national skills needs was systematically undermined by the absence of mechanisms for communicating verified labour market information to schools and learners (Wawire & Ndirangu, 2025); the Trans Nzoia County evidence presented here provides a concrete, school-level illustration of exactly this mechanism in operation, tracing, through learner, teacher, and observation data together, precisely how the resulting information vacuum is filled by informal and unverified community narrative instead.

The convergent evidence on gender roles similarly complicates what might otherwise be read as a purely community-level or family-level phenomenon. The finding that gender-stereotyped career displays were present in the majority of sampled schools indicates that the institutional environment of the junior school, rather than

counterbalancing the gender norms learners encounter at home, is in this county actively reproducing them, a finding with direct relevance to CBE's stated equity goals. The qualitative evidence that parent representatives frame differentiated gender expectations partly as a practical response to resource and role-model scarcity, rather than purely as ideological preference, further suggests that addressing this dimension of contextual influence will require more than awareness campaigns directed at attitudes; it will require attention to the material and representational conditions, including the visibility of local female professionals in non-traditional fields, that give those attitudes their practical grounding.

Overall, the findings on objective four indicate that contextual influence on Grade 9 pathway selection in Trans Nzoia County operates largely outside formal institutional channels, is experienced unevenly across learners, particularly with respect to gender-role pressure, and is, in the specific case of labour market information, actively unsupported and effectively unchecked by the school environment. This positions contextual factors not simply as a background condition of pathway selection but as an active and, in the case of gender-stereotyped displays, an institutionally reinforced determinant of the choices Grade 9 learners in the county ultimately make.

5. Conclusion

This study set out to evaluate the effect of contextual factors, namely labour market awareness and societal gender roles, on Grade 9 learners' career pathway selection in junior secondary schools in Trans Nzoia County, Kenya. The evidence gathered establishes that contextual factors exert a high and statistically significant influence on pathway selection, ranking second only to personal factors among the variables examined. However, the influence documented is neither uniform nor institutionally well supported: labour market awareness, while strongly self-reported, was found to rest on unverified community narrative rather than on any information supplied by the school, and gender-role influence, while convergently confirmed across all three data sources, was shown to be reinforced rather than corrected by gender-stereotyped career materials present in the majority of sampled schools. Contextual influence in this county therefore operates as an informal, largely unchecked force that the current school environment does not counterbalance, and in the case of gender norms, actively amplifies.

6. Recommendations

Arising from this study findings, it is recommended that career guidance teachers in Trans Nzoia County junior schools incorporate a structured labour-market information session into the Grade 9 guidance programme, drawing on verified data from the Kenya National Bureau of Statistics and the Ministry of Labour on employment trends and in-demand skills across all three CBE pathways, so that learners' evident receptiveness to economic reasoning is met with accurate rather than informally sourced information. It is further recommended that school principals and career guidance teachers audit all career information displays and guidance materials and replace any that depict occupations in gender-stereotyped ways, given the observation-confirmed presence of such materials in the majority of sampled schools. County education officials should additionally consider facilitating structured exposure to local female professionals working in non-traditional fields, addressing the representational gap that parent representatives identified as underlying some gender-differentiated career expectations.

For further research, a follow-up study should examine, in greater depth, the specific sources and accuracy of the career information that Grade 9 learners in rural Kenyan counties rely upon, tracing this information from its point of origin through to its influence on pathway choice, so that career information interventions can be more precisely targeted and evaluated for effectiveness.

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