Evaluating Career Guidance Effectiveness on Pupils' Career Decisions in Ndola District, Zambia

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ABSTRACT

Career guidance and counselling (CGC) is positioned in Zambian education policy as central to pupils' school-to-work transition, yet district-level evidence on whether it works, and why it falters, remains scarce. Drawing on Sen's Capability Approach, this convergent parallel mixed-methods study evaluated the effectiveness of CGC and the barriers to its delivery and uptake in 15 secondary schools in Ndola District. Questionnaires were completed by 560 Grade 12 pupils, 25 headteachers and deputy headteachers, 24 guidance teachers and 50 parents or guardians. Quantitative data were analysed using descriptive statistics, chi-square and exact binomial tests and multivariable logistic regression, and open-ended responses were analysed thematically. Only 10% of pupils reported greater decision-making confidence from school guidance, and 5% had changed their plans as a result. By contrast, 82% reported that parents influenced their career decisions, 78% family finances, 75% anticipated examination results, 75% friends and 71% gender stereotypes, against 29% for school counsellors or teachers. Sixty per cent of pupils had never attended a career talk. After adjustment for gender, age, parental education and parental employment, pupils in government schools had 61% lower odds of having received any career guidance than pupils in private schools (adjusted odds ratio = 0.39; 95% confidence interval: 0.23–0.66; $p < 0.001$). Only 4 of 25 school leaders reported timetabled CGC, and 20 of 25 reported that delivery relied on teachers with part-time guidance roles. Institutional, socio-economic and pedagogical barriers operated together as negative conversion factors. Because the design was cross-sectional, the findings describe associations and not causal effects. Expanding pupils' real freedom to choose careers will require timetabled CGC, a professionalised guidance workforce and structured parental engagement.

Keywords: career guidance and counselling, Capability Approach, mixed methods, secondary school pupils, Zambia

INTRODUCTION

Career guidance and counselling (CGC) is widely recognised as essential for supporting pupils' school-to-work transitions and aligning education with labour market needs (International Labour Organization [ILO], 2024). In Zambia, national policy frameworks, including the 2023 Zambia Education Curriculum Framework and the 2022–2026 Ministry of Education Strategic Plan, formally position school-based CGC as a core function intended to ensure that pupils pursue pathways that respond to their abilities and to the labour market (Malinda & Mandyata, 2021; Ministry of Education [MoE], 2022, 2023; Ministry of Education, Science, Vocational Training and Early Education [MESVTEE], 2013).

Evidence from Zambia and elsewhere in sub-Saharan Africa nevertheless points to a persistent implementation gap. Many schools lack trained counsellors, depend on teachers who carry other responsibilities, and run chronically underfunded programmes. The reported consequences are low participation and frequent mismatches between pupils' competencies and their career choices (Kabombo et al., 2025; Malinda & Mandyata, 2021). These institutional weaknesses are compounded by parental expectations, gender norms and financial constraints, which frequently override school-based guidance and narrow learners' real freedom to act on their aspirations (Dominic et al., 2024; Mukumbi et al., 2025).

The problem addressed in this study is that policy commitments to CGC have not translated into consistent practice in Zambian secondary schools, so that pupils' career choices appear to be shaped more by external pressures than by informed self-assessment and labour market awareness. Two gaps in the evidence limit an effective response. First, localised, learner-centred research is scarce: existing studies have not systematically explored how institutional, economic, social and personal factors interact to shape career decision-making within a specific district, as research in Mpika (Nyirongo, 2023) and Mongu (Mukumbi et al., 2025) has highlighted. Second, limited attention has been given to the experiences of Grade 12 pupils, who are at the critical point of transition out of secondary school (Manda, 2019; Munyati, 2017). The study is timely because Zambia is still implementing its 2023 Education Curriculum Framework. Without evidence on what works and what hinders effectiveness, implementation risks remaining aspirational instead of transformative.

Study Objectives

This study addressed these gaps by evaluating career guidance interventions in Ndola District and analysing the multi-layered barriers that constrain informed decision-making, from the viewpoints of Grade 12 pupils, headteachers and deputy headteachers, guidance and counselling teachers, and parents or guardians of Grade 12 pupils. The study pursued two objectives: (1) to evaluate the effectiveness of career guidance interventions in shaping informed career decisions among pupils; and (2) to identify the institutional, socio-economic and pedagogical barriers affecting the delivery and uptake of career guidance services.

LITERATURE REVIEW

Effectiveness of Career Guidance Interventions in Shaping Informed Career Decisions

Evaluating the effectiveness of career guidance is central to understanding its role in informed career decision-making. Well-designed programmes have been associated with improvements in pupils' ability to make choices that align with their strengths, interests and labour market realities (Kabombo et al., 2025), and schools with well-developed career guidance initiatives report lower rates of pupil indecision and more successful transitions into vocational training, higher education or employment (Dodd et al., 2022; Sahito et al., 2025). The Capability Approach offers a useful theoretical lens for interpreting such findings. Sen (1999) argues that development should be understood in terms of people's substantive freedoms, that is, their capabilities to pursue lives they have reason to value. Applied to career guidance, the framework shifts the focus from the provision of information to the expansion of pupils' capabilities to make informed choices (Robertson, 2015). It distinguishes three interconnected elements: capabilities, which are the real freedoms to choose valued careers; functionings, which are the careers actually pursued; and conversion factors, which are the personal, social and environmental conditions that enable or constrain the transformation of resources into capabilities (Robeyns, 2005). On this view, interventions must extend beyond information dissemination to strengthen positive conversion factors such as critical self-reflection, skills and confidence (Alla-Mensah & McGrath, 2023; Mwelwa & Mawela, 2021).

Empirical studies support this view, although the strength of the evidence varies. In Albania, career guidance workshops were followed by significant increases in career self-efficacy and goal clarity (Jemini Gashi et al., 2023), and in Pakistan a CGC programme was reported to raise career decision-making confidence from 20% to 55% (Sahito et al., 2025). Experiential learning and personalisation also appear to enhance effectiveness, with pupils valuing direct work experience and individualised guidance (Buckley-Burnell & Cordie, 2023; Manda, 2019). Much of this evidence, however, concerns structured programmes delivered under favourable conditions. It therefore shows what guidance can achieve and says less about what routine school provision does achieve.

Evidence from sub-Saharan Africa adds contextual depth and suggests that the quality of implementation matters more than the mere presence of a service. In Rwanda, well-implemented strategic interventions explained over 50% of the variation in academic performance, whereas routine provision explained only 10.2% (Ineza & Ndagijimana, 2025). In Uganda, career guidance was implemented intermittently, a pattern associated with weaker career identity outcomes (Otwine et al., 2022). In Kenya, 75% of career guidance and counselling teachers did not use the resources available for career guidance activities (Lwangu et al., 2020). Taken together, these findings challenge the assumption that providing resources alone drives improved outcomes: effectiveness depends on structured delivery, trained personnel and institutional support as well as on adequate resources. They also point to a limitation of this literature. Effectiveness tends to be inferred from what providers report or from associations with academic performance, and it is seldom tested against pupils' own accounts of whether guidance changed their decisions.

Barriers to Effective Implementation

Barriers to effective implementation operate simultaneously at the institutional, socio-economic, socio-cultural, psychological and pedagogical levels. They are reviewed in turn below, although, as argued later, their effects are interdependent.

Institutional Barriers

At the institutional level, chronic underfunding, weak labour-market alignment and reliance on overburdened personnel, or on personnel not specifically trained in CGC, are widely documented (Kabombo et al., 2025; Malinda & Mandyata, 2021). These problems are compounded by inadequate inter-ministerial coordination and the absence of labour market intelligence (UNICEF Zambia & Genesis Analytics, 2022), and many schools lack dedicated budgets, materials or technological infrastructure. In Zambian secondary schools, the guidance department has progressively absorbed additional mandates, including HIV/AIDS education, life skills and general counselling. This has diluted the focus for which the department was designed, and guidance and counselling teachers frequently carry a full teaching load alongside their career guidance duties (Kabombo et al., 2025).

Socio-Economic and Structural Barriers

Socio-economic and structural conditions form a second set of barriers. Poverty, narrow labour markets and underfunded schools reduce pupils' opportunities for career exploration (Fernandes & Rawatlal, 2024; Kabombo et al., 2025). Access to career information is further limited by the digital divide (Zambia Information and Communications Technology Authority [ZICTA], 2022), and inequities between urban and rural areas affect access to qualified counsellors and quality information (Moono et al., 2019). These constraints reproduce existing inequalities and are particularly pronounced for pupils from lower socio-economic backgrounds (Kabombo et al., 2025; Nyirongo, 2023).

Socio-Cultural Barriers

Socio-cultural factors, particularly gender stereotypes and familial pressure, also narrow perceived opportunities, especially for girls (Barbosa-Silva et al., 2025). Female pupils have been found to gravitate towards traditionally "feminine" professions while their male peers explore a broader range of options (Menon et al., 2012), a pattern that entrenches occupational segregation (Mukumbi et al., 2025). In addition, parental expectations frequently override pupils' aspirations, particularly where career choice is viewed as a family decision and not an individual one (Dominic et al., 2024). These pressures are internalised by pupils and shape their self-perceptions.

Psychological Barriers

Psychological barriers follow from these conditions. Perceptions of limited opportunity can breed hopelessness and low motivation, which reduce pupils' willingness to engage with guidance (Lubawa et al., 2021), and a lack of self-awareness about vocational pathways constrains decision-making (Adoga, 2020). Pupils from disadvantaged backgrounds may be discouraged by options that are inaccessible to them, while those from more

privileged backgrounds may experience anxiety about meeting their families' expectations. These psychological dimensions influence whether pupils act on the guidance they receive.

Pedagogical Barriers

The prevailing approach to CGC relies on transmission-based models that prioritise passive information dissemination over interactive, pupil-centred strategies (Kabombo et al., 2025; Mukumbi et al., 2025). General career talks to large groups and once-off events have been the dominant mode of delivery, while experiential learning opportunities are rarely used. When pupils are passive recipients and not active participants, they are less likely to develop the self-knowledge, critical reflection and decision-making confidence that informed choice requires. Without individualised guidance, moreover, pupils' particular circumstances are not addressed.

Comparative Regional Analysis

A cross-national comparison of implementation barriers across sub-Saharan Africa shows both convergence and divergence. In Kenya, Lwangu et al. (2020) found that every principal confirmed having no budgetary allocation specifically for career guidance, and 83.3% of guidance teachers rated resource contributions as "poor". In Uganda, Otwine et al. (2022) identified capacity failure as the dominant barrier: teachers lacked the skills needed to conduct career assessments and give structured feedback, and pupil-to-counsellor ratios were estimated at 3,500:1. In Botswana, Ndiane and Iloanya (2025) found that vocational education, although formally present, was marginalised, treated as optional and inconsistently implemented. In South Africa, Farao and du Plessis (2024) identified inadequate depth: career guidance existed but was heavily constrained by time pressure and a lack of resources. Read through the Capability Approach, financial absence, capacity failure, structural marginalisation and inadequate depth are four distinct types of negative conversion factor (Robeyns, 2005). Each of these studies, however, foregrounds one dominant barrier within one country. They do not establish whether the four types co-occur within a single setting or how they interact, which is the question the present study takes up.

Research Gap

First, while systemic challenges to career guidance in Zambia are well documented at the national level (Kabombo et al., 2025; Malinda & Mandyata, 2021; UNICEF Zambia & Genesis Analytics, 2022), district-level evidence on how barriers interact is lacking. Second, the experiences of Grade 12 pupils, who are at a critical stage of transition, have received limited attention (Manda, 2019; Munyati, 2017), and provider accounts of guidance have seldom been compared with the accounts of the pupils and parents they serve. Third, although the Capability Approach has been applied to career guidance elsewhere (Alla-Mensah & McGrath, 2023; Robertson, 2015, 2016), its application to Zambian secondary schools remains underexplored. The study responds to these limitations in two ways. Empirically, it brings together the perspectives of pupils, school leaders, guidance teachers and parents within a single district, so that reported provision can be set against experienced outcomes. Theoretically, it uses the concept of conversion factors to explain why a resource that exists in policy may fail to become a real capability for pupils, and it classifies the barriers observed as environmental, social or personal conversion factors.

Conceptual Framework

While the Capability Approach serves as the overarching theoretical lens, the conceptual framework operationalises it by mapping the specific variables under investigation (Figure 1).

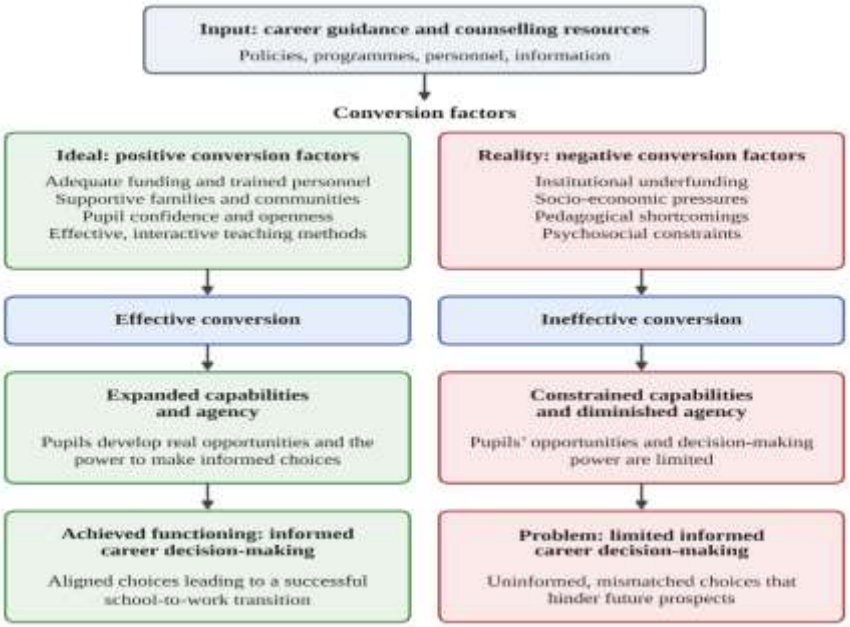


Figure 1: *Conceptual Framework of the Study*

The framework proposes that career guidance services interact with positive and negative conversion factors to shape pupils' capabilities for informed career decisions. Two contrasting pathways are distinguished. In the ideal pathway, well-resourced guidance services operate alongside positive conversion factors, expanding pupils' capabilities and agency and enabling informed career choices. In the reality pathway, hypothesised for Ndola District, institutional, socio-economic and pedagogical barriers act as negative conversion factors that diminish pupils' capabilities and lead to uninformed or externally imposed decisions. The framework aligns with the study's objectives by serving as an analytical map for examining how the interplay of resources and barriers is associated with the career decision-making outcomes observed among Grade 12 pupils.

Research Questions

The following research questions guided this investigation:

1. How effective are current career guidance interventions in enabling pupils to make informed career decisions?
2. What are the key institutional, socio-economic, and pedagogical barriers hindering the effective delivery and pupil uptake of career guidance services?

METHODOLOGY

Research Design

The study adopted a convergent parallel mixed-methods design within a cross-sectional survey. Quantitative and qualitative data were collected at the same time, analysed separately and then merged at the interpretation stage, so that the open-ended responses could add depth and context to the quantitative results and allow findings to be triangulated across stakeholder groups (Creswell & Plano Clark, 2018). The cross-sectional survey was appropriate for describing career guidance delivery and decision-making at a single point in time and for identifying patterns and associations across a large sample. It does not, however, permit causal inference, and the results are interpreted accordingly.

Research Setting

The study was conducted in Ndola District, the administrative and commercial capital of Zambia's Copperbelt Province. Ndola was selected for its mix of government, grant-aided and private secondary schools and of urban and peri-urban locations, which provided a range of socio-economic and institutional contexts.

Sampling and Participants

A multi-stage sampling strategy was employed, using the official District Education Board Secretary's (DEBS) master list of 53 secondary schools as the sampling frame. The sample size for Grade 12 pupils was determined using Cochran's (1977) formula for a finite population $n_0 = (Z^2pq)/c^2$, where Z = 1.96 (95% confidence level), p = 0.5, q = 0.5 and c = 0.05. This yielded an initial sample of 384 pupils. Adjustment for the finite population of 10,315 Grade 12 pupils in Ndola District gave a minimum sample of 371. This minimum was inflated by 20% to allow for non-response and incomplete questionnaires, giving a target of 445 pupils. The final sample comprised 560 pupils.

In the first stage, the 53 schools were stratified by type (36 government, 9 private and 8 grant-aided) and, within each type, by urban or peri-urban location. Fifteen schools were then selected by stratified random sampling: 10 government schools (7 urban and 3 peri-urban), 3 private schools (all urban) and 2 grant-aided schools (1 urban and 1 peri-urban).

In the second stage, Grade 12 pupils were selected from class registers by simple random sampling. Where a sampled pupil was absent or declined to take part, a replacement was selected at random from the same register.

Headteachers, deputy headteachers and guidance and counselling teachers were sampled purposively. The aim was to include the headteacher and deputy headteacher of every sampled school and at least two guidance and counselling teachers per school. In total, 13 headteachers, 12 deputy headteachers and 24 guidance teachers participated. Parents or guardians of participating Grade 12 pupils were recruited purposively, with a target of at least 30; 50 participated.

Research Instruments and Data Collection

Data were collected using four semi-structured questionnaires, one for each participant group, which combined closed-ended items with open-ended prompts. The closed-ended items used categorical, binary (yes/no) and four- or five-point ordinal response formats. The questionnaires were adapted from Namoonde (2017), whose instrument was developed for a comparable Zambian secondary school context. Pupil questionnaires were self-administered on paper under quiet conditions within schools over eight school days. Adult participants completed the questionnaire either on paper or through a secure online form, according to their preference and availability.

Response was as follows. A total of 560 usable pupil questionnaires were obtained, exceeding both the minimum sample of 371 and the target of 445. Because absent or declining pupils were replaced, a conventional response rate could not be calculated for pupils; item non-response on the closed-ended items answered by all pupils ranged from 0% to 3.4%. Among staff, 25 of the 30 headteachers and deputy headteachers in the 15 schools took part (83%), and 24 guidance teachers took part against a target of 30 (80%). Parent questionnaires were first sent home with pupils; because fewer than 20% were returned, the questionnaire was then distributed as an online form, and 50 parents or guardians took part.

Validity and Reliability of the Instruments

Content validity was addressed in three ways. The questionnaires were adapted from an instrument previously used in Zambian secondary schools (Namoonde, 2017); the adapted items were reviewed by three subject-matter experts for clarity and alignment with the research questions; and the pupil questionnaire was piloted with ten Grade 12 pupils who were not part of the main sample, after which items that the pilot pupils found ambiguous were reworded. The adult questionnaires were also piloted at a secondary school that was not included in the study.

Internal consistency was assessed with Cronbach's alpha for each set of items intended to measure a single construct. Among pupils, alpha was 0.88 for information received on post-school pathways (four items, n = 557), 0.95 for perceived help with self-understanding and decision confidence (three items, n = 560) and 0.78 for barriers affecting career plans (seven items, n = 536). Alpha was 0.75 for guidance teachers' ratings of the effect of their own guidance (four items, n = 24), 0.75 for school leaders' ratings of the contribution of CGC to pathway

awareness (three items, n = 25) and 0.77 for parents' ratings of the help received from school CGC (four items, n = 48). All coefficients exceeded the conventional threshold of 0.70. The items on sources of influence on career decisions refer to conceptually distinct influences and showed low internal consistency among pupils (alpha = 0.55); they were therefore analysed as individual items and were not combined into a scale.

Data Analysis

Quantitative data were cleaned, coded and analysed in IBM SPSS Statistics (version 27). Descriptive statistics summarised the samples and key indicators (Taherdoost, 2020). Because the staff samples were small, counts are reported alongside percentages for school leaders and guidance teachers, and exact binomial tests were used to assess whether the proportion endorsing each yes/no item differed from one half.

Associations between pupil characteristics and access to career guidance were examined with Pearson chi-square tests, with Cramér's V as the measure of effect size. A binary logistic regression model was then fitted to identify factors independently associated with access. The outcome was pupil-reported access to career guidance, coded 1 where the pupil reported having attended at least one career talk or guidance session during secondary school and 0 where the pupil reported never having attended one. School type (reference: private), gender (reference: male), age group (reference: 16–18 years), parental education (reference: university) and parental employment (reference: formal job) were entered simultaneously. Results are presented as regression coefficients (B), standard errors (SE), Wald statistics, adjusted odds ratios (AOR) with 95% confidence intervals (CI) and p values. Model fit was assessed with the omnibus likelihood-ratio test, the Hosmer–Lemeshow goodness-of-fit test, Nagelkerke's R^2 and the area under the receiver operating characteristic curve (AUC), and multicollinearity was checked with variance inflation factors. Statistical significance was set at $p < 0.05$ (two-sided).

Qualitative data from the open-ended responses were analysed thematically following Braun and Clarke's (2006) six-phase framework: familiarisation with the data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report (see also Ahmed et al., 2025). Quotations are reported verbatim and are identified by participant group and a sequential number (Pupil, pupil; HT, headteacher or deputy headteacher; GT, guidance teacher; CP, parent or guardian).

The two strands were integrated at the interpretation stage. For each research question, the quantitative results and the qualitative themes were set side by side in a joint display and classified as convergent (the strands agree), complementary (the qualitative strand explains or extends the quantitative result) or discrepant (the strands or the stakeholder groups disagree) (Creswell & Plano Clark, 2018). The joint display is presented in Table 7.

Ethical Considerations

Ethical approval was granted by the Humanities and Social Sciences Research Ethics Committee of the University of Zambia (reference HSSREC-2025-NOV-014). Administrative permission was obtained from the District Education Board Secretary and from participating schools. Informed consent was obtained from adult participants, and assent from pupils. Participants were assured of confidentiality and anonymity and informed of their right to withdraw at any time.

The study used fully anonymised questionnaires that collected no personal identifiers, consistent with the Data Protection Act, 2021, which defines "personal data" as information from which an individual can be identified (Government of Zambia, 2021, s. 2). As no such data were collected, Section 17 of the Act, which addresses children's personal data, was not triggered (Government of Zambia, 2021, ss. 3, 17).

Researcher Reflexivity

The first author acknowledges that her professional background and experience may have shaped her perspectives on career guidance. To mitigate potential bias, data were collected using standardised instruments, the qualitative analysis followed Braun and Clarke's (2006) six-phase framework, and a reflexive journal was maintained throughout the research process to document decisions and interpretations.

RESULTS AND DISCUSSION

Demographic Characteristics of Participants

A total of 560 Grade 12 pupils participated in the study (Table 1). Most attended government schools (61%, n = 340), with 23% (n = 129) from grant-aided schools and 16% (n = 91) from private schools. The majority (86%, n = 484) were aged 16–18 years, and 53% were female (n = 295) and 47% male (n = 265).

Table 1: *Socio-Demographic Characteristics of Grade 12 Pupils (N = 560)*

Variable	Category	Frequency	Percentage (%)
School Type	Grant-Aided	129	23
	Government	340	61
	Private	91	16
Age	16 – 18	484	86
	19 – 20	66	12
	21 and above	10	2.
Gender	Male	265	47
	Female	295	53
Parental Education	Primary or None	41	7
	Secondary	169	30
	College or Vocational	78	14
	University	201	36
	Not sure	71	13
Parental Working Status	Formal Job	247	44
	Runs own business	190	34
	Casual / informal work	48	9
	Unemployed	62	11
	Other	10	2

Note. Percentages are valid percentages. Three pupils did not report parental working status (n = 557).

The characteristics of the adult respondents are presented in Tables 2 and 3. A total of 25 headteachers and deputy headteachers participated, drawn from grant-aided (n = 3), government (n = 16) and private (n = 6) schools, with 18 from urban and 7 from peri-urban schools (Table 2).

Table 2: *Demographic Characteristics of Headteacher and Deputy Headteacher Respondents (N = 25)*

Variable	Category	Frequency	Percentage (%)
School Type	Grant-Aided	3	12
	Government	16	64
	Private	6	24
Location	Urban	18	72
	Peri-urban	7	28
Position	Headteacher	13	52
	Deputy Headteacher	12	48

Among the 50 parents and guardians, most were mothers (60%) and most had children in government schools (76%); 56% held a post-secondary qualification (Table 3).

Table 3: *Demographic Characteristics of Parent and Guardian Respondents (N = 50)*

Variable	Category	Frequency	Percentage (%)
Pupil's School Type	Grant-Aided	5	10
	Government	38	76
	Private	7	14
Relationship to Pupil	Mother	30	60
	Father	17	34
	Guardian	3	6
Highest Education	Primary	9	18
	Secondary	13	26
	Vocational / College	3	6
	Degree / Diploma	19	38
	Postgraduate	6	12

The 24 guidance teachers were drawn from grant-aided (n = 4), government (n = 14) and private (n = 6) schools. Eleven held a specialised certificate or diploma in guidance and counselling, seven had been trained through workshops or seminars, and six were self-taught or had learned on the job. The pupil sample thus covers the three school types, both genders and the expected age range of Grade 12 pupils, whereas the adult samples are small and purposive and are interpreted descriptively.

Effectiveness of Career Guidance Interventions

Pupil-Reported Impact on Career Decision-Making

School-based guidance had a limited reported impact on pupils' career decisions, which were shaped mainly by influences outside the guidance office (Figure 2). Parents or guardians were reported as an influence by 82% of pupils, family finances by 78%, anticipated Grade 12 results by 75%, friends by 75% and gender stereotypes by 71%, whereas school counsellors or teachers were cited by only 29%. The contrast is sharper when only strong influence ("a lot" or "a great deal") is considered: 52% of pupils reported strong parental influence and 48% a strong influence of anticipated results, compared with 4% for school counsellors or teachers. Family finances, friends and gender stereotypes were widely reported but were rated as strong influences by only 20–23% of pupils.

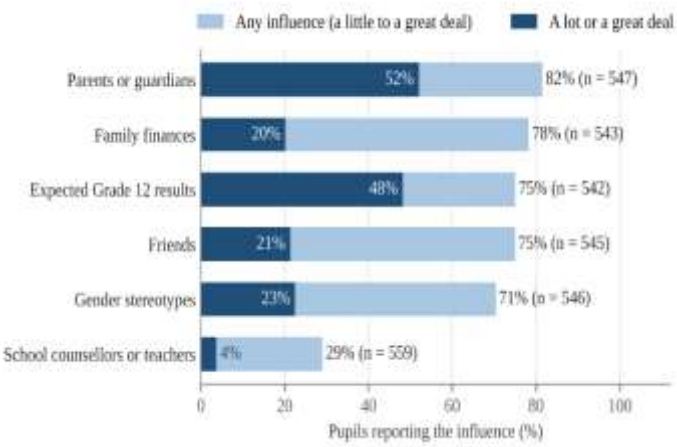


Figure 2: *Influences on Pupils' Career Decisions (Valid Percentages)*

Figure 3 shows the correspondingly limited impact of school guidance on pupils' pathway awareness and self-understanding. About one-third of pupils reported that guidance had helped them, at least a little, to learn about university (33%), technical college (28%), starting a business (33%) or the jobs available in Zambia (32%), and 37% reported some help in understanding the subjects and grades needed for their plans. Only 10% agreed that guidance had increased their confidence in making career decisions, and 5% had changed their intended career as a result.

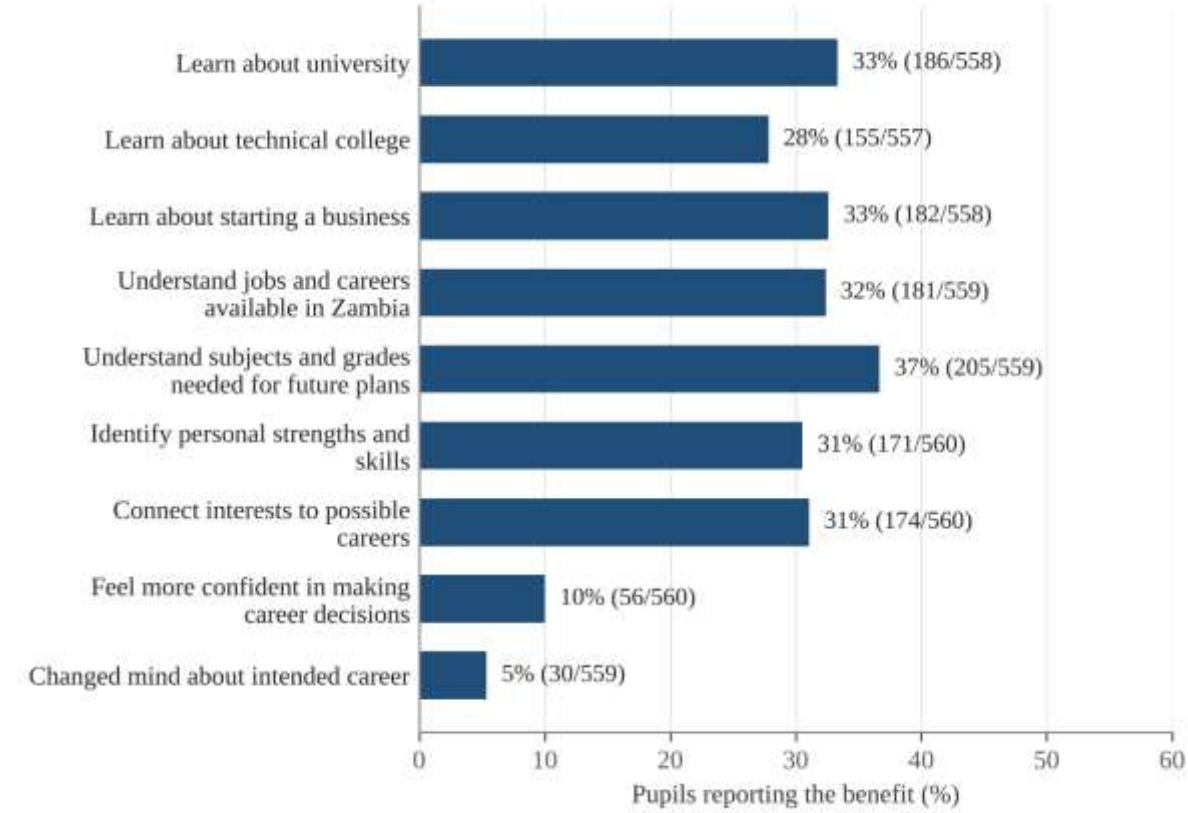


Figure 3: *Perceived Impact of Career Guidance on Pupils' Pathway Awareness and Self-Understanding (Valid Percentages)*

This perception–outcome gap is important. While 19 of 25 school leaders and most guidance teachers regarded their services as effective, pupil-level outcomes indicate little impact on actual decision-making. School stakeholders may therefore be equating the provision of guidance with its effectiveness, a conflation that masks its limited contribution to pupils' decision-making agency.

The open-ended responses suggest an explanation for this pattern: a pervasive conflict between pupils' personal aspirations and their families' expectations. Pupils described personal career aspirations being overridden by parental authority. One pupil recounted: *"Yes, I wanted to become a police officer…now I will become a medical doctor because that is what my parents told me."* (Pupil 1). Another recalled how their aspirations were dismissed as impractical: *"I wanted to do aviation, but they told me I was being 'unrealistic'"* (Pupil 2). Family expectations were tied to tradition: "*I always wanted my career to be an engineer, but my family wants me to become a doctor because there is no doctor in my family*" (Pupil 3).

Financial realities formed another barrier: "*Every time I tell them what I want to do they say we don't have money for the career you want*" (Pupil 4), while another pupil explained, "*My family wanted me to go for a program they can afford since they earn little*" (Pupil 5). Gender norms further constrained female pupils: "*My interest of pursuing criminal law did raise a few eyebrows among family members as they expected me to do something more feminine like nursing*" (Pupil 6). Such pressures could silence aspirations entirely: "*I have actually written a book, but I was shy to even tell them, honestly*" (Pupil 7).

These accounts illustrate how personal ambition can be silenced and are consistent with the powerful role of socio-cultural conversion factors in overriding formal guidance (Dominic et al., 2024; Fernandes & Rawatlal, 2024). The pattern is not merely one of competing influences; it points to a deficit of agency. In Sen's (1999) terms, pupils may possess the resource of career information but lack the capability to act on it, because negative conversion factors, including familial pressure, financial precarity and internalised self-censorship, neutralise the potential of school guidance.

This interpretation is reinforced by the finding that school-based guidance was itself delivered episodically: only 4 of 25 school leaders reported timetabled sessions, and 60% of pupils (335 of 559) reported never having attended a career talk. The intermittent nature of provision mirrors the pattern identified in Uganda (Otwine et al., 2022). In capability terms, the resource exists in policy, but its mode of delivery limits its conversion into genuine opportunity. Career guidance is unlikely to build agency when it is offered as an occasional event and not as an integrated, sustained process.

Pupil-Reported Barriers Affecting Career Plans

Pupils identified informational, social and financial barriers as the most pressing obstacles to acting on their career plans (Figure 4). The barriers most frequently reported as a problem of any size were "not knowing the steps to apply or get started" (84%), "not knowing the right people to help" (82%), being "afraid of not finding a job" (81%) and "not having money for college or training" (80%); each of these was rated a medium or big problem by 56–58% of pupils. A majority also reported "not feeling confident" (63%), pressure to choose a "safe" career (59%) and not knowing what career to pursue (56%), although these were rated a medium or big problem by about one-third of pupils.

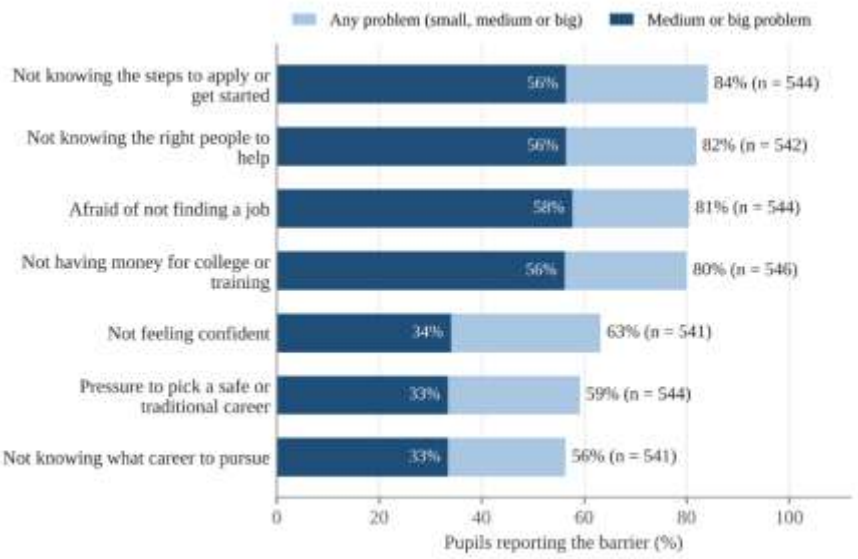


Figure 4: *Barriers Affecting Pupils' Career Plans (Valid Percentages)*

Procedural uncertainty was therefore as prominent as financial and social constraints: most pupils did not know how to take the next step, did not know whom to ask and doubted that they could pay for further study or find work afterwards. This pattern is consistent with the low exposure to career guidance reported above.

The open-ended responses illustrate the experiences behind these figures: "*Even if I decide on a career, my family cannot afford to sponsor me"* (Pupil 8); *"I don't have a sponsor"* (Pupil 9); *"My biggest challenge is I wonder if I will even get a job because jobs are rarely found"* (Pupil 10); *"I don't have anyone to teach me about the steps of knowing a career"* (Pupil 11); *"I have no one to help me"* (Pupil 12).

Together, limited procedural knowledge, financial constraints, fears about employment and the absence of social connections form a powerful set of negative conversion factors that hinder pupils from translating career aspirations into achievable plans. They are barriers not only to accessing guidance but also to acting on it: even where career information is received, pupils may lack the resources, networks and confidence to use it.

Stakeholder Perspectives on Effectiveness

In contrast to pupils' reports, school leaders held generally positive views of CGC effectiveness. Of the 25 headteachers and deputy headteachers, 19 considered career guidance very or somewhat effective, although their open-ended responses acknowledged its limits in the face of external influences: *"Influence by most parents on pupils to take up careers dictated to them"* (HT1); *"Parental involvement; some pupils are not helped from parents, hence working with these pupils is difficult"* (HT2).

Guidance teachers were similarly positive (Figure 5): 22 of 24 agreed that their guidance helped pupils to understand their strengths and interests, 22 that it increased pupils' confidence in decision-making, and 20 that it supported the development of realistic plans for life after Grade 12. Their open-ended responses, however, showed a clear awareness of its limits: "*Most pupils are influenced by their parents to take certain careers even after being guided accordingly*" (GT1).

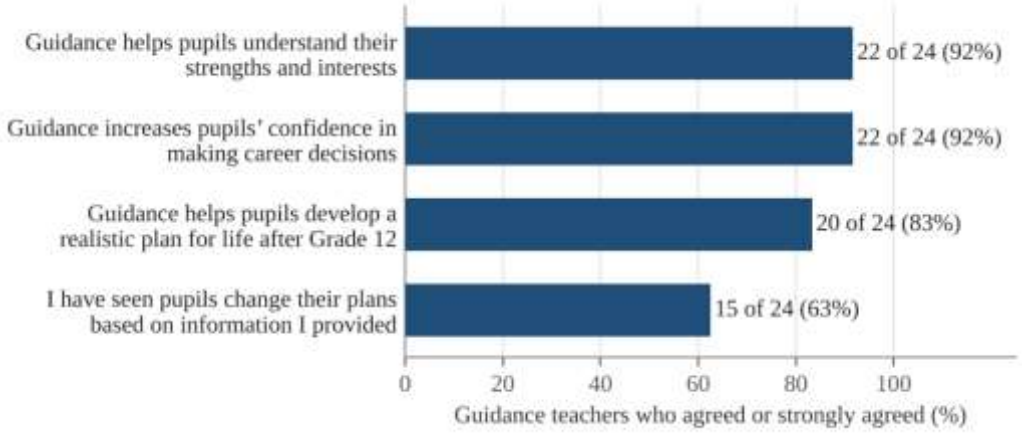


Figure 5: *Guidance Teachers' Perceptions of the Effect of Their Guidance (N = 24)*

A gap nevertheless emerged between perceived effectiveness and observed outcomes. Although 22 of 24 guidance teachers believed that their services increased pupils' confidence, only 15 had seen pupils change their career plans in response to the guidance provided, and only 10% of pupils themselves reported increased confidence. Guidance teachers may therefore overestimate their influence relative to the socio-cultural forces that shape pupils' decisions.

Parents reported high involvement in their children's career planning: 94% (47 of 50) had discussed career plans with their children, 84% reported having at least a little influence on their child's career choice and 50% described that influence as strong or very strong. Sixty per cent reported noticing a positive change in their children's confidence as a result of school-based guidance, a perception that contrasts sharply with the 10% of pupils who reported increased confidence. In their open-ended responses, parents positioned themselves as partners seeking more structured support. For example: "*Make career guidance to be on the school timetable so that it is consistent. Not careers day where teachers just want to make money off the parents"* (CP1) and *"Career sensitisation enhancement and parent involvement in career choice decision making is necessary"* (CP2).

These patterns point to a misalignment between parents' self-perception as facilitators and pupils' experience of parental influence. Parents appear to view themselves as supportive collaborators, whereas pupils' accounts describe that influence as prescriptive and constraining. This disconnect represents an underused opportunity for collaborative guidance that bridges school and home.

Future Plans and Perceived Preparedness

Post-secondary plans leaned towards university (57%), with smaller proportions planning to start a business (11%), attend a technical college (7%) or look for a job (5%); 17% remained undecided and 3% had other plans (n = 555). While 84% of pupils (464 of 550) felt at least a little prepared to take their next step, only 34%

considered that Grade 12 had prepared them fully for it; 44% felt partly prepared, 11% felt unprepared and 11% did not know (n = 554).

The open-ended responses help to explain this discrepancy. Pupil 13 wrote, *"I wish someone had explained to me earlier how the subjects I choose connect to different careers. I only realized in Grade 12 that I needed different subjects for the career I want."* Pupil 14 explained that *"The career guidance was too general, from more of a global perspective and not individualized."* The gap between a general sense of readiness and specific preparation is a weakness of current career guidance: pupils may feel broadly prepared, but the limitations become apparent when they consider how their subject choices align with their career aspirations.

Barriers to Effective Career Guidance

Institutional Barriers

School leaders identified an overloaded curriculum (17 of 25, 68%), insufficient funding (14 of 25, 56%) and high pupil-to-counsellor ratios (13 of 25, 52%) as the main institutional obstacles to effective CGC delivery (Figure 6).

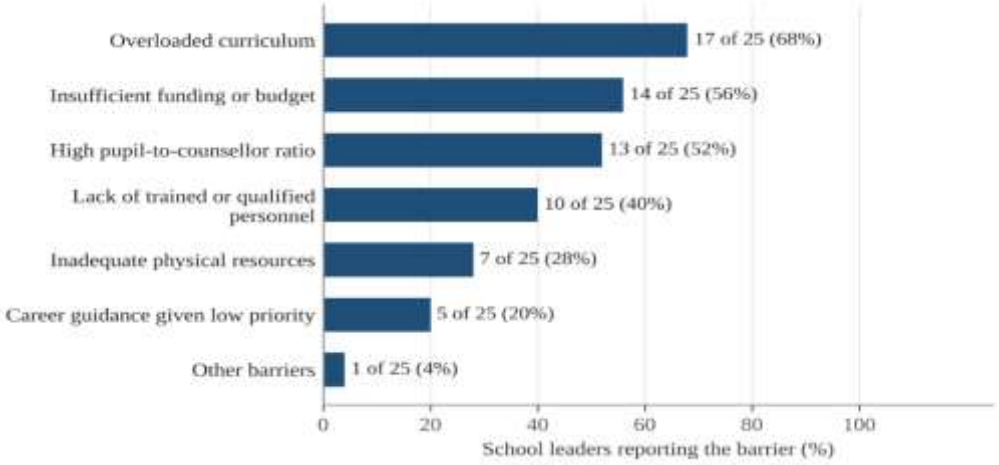


Figure 6: *Barriers to Providing Effective Career Guidance at School (School Leaders, N = 25)*

These perceptions are consistent with the material deficits reported across the sampled schools. As shown in Figure 7, only 5 of 25 school leaders reported computers with reliable internet access for career research, 7 reported a dedicated CGC budget and 8 reported up-to-date career information materials, and none reported a library section dedicated to career materials. The absence of such basic infrastructure limits pupils' ability to explore careers independently beyond formal guidance sessions.

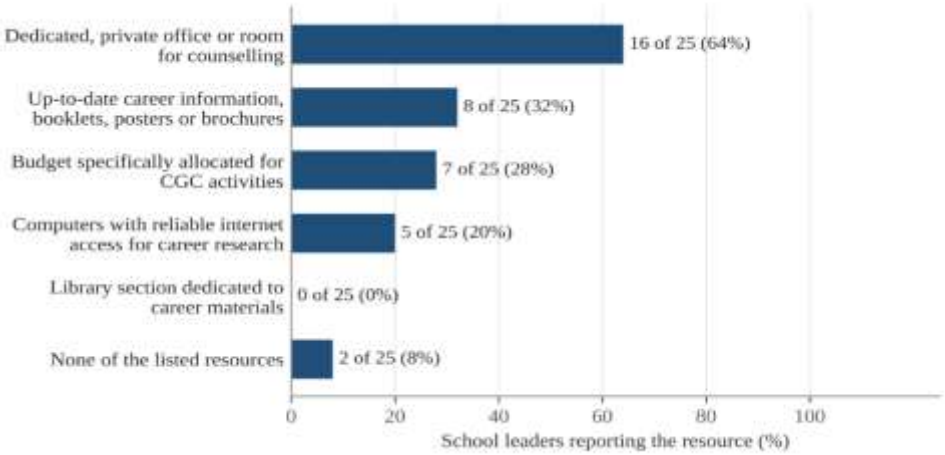


Figure 7: *Physical and Material Resources to Support CGC (School Leaders, N = 25)*

The most consequential institutional gap, however, is the absence of timetabled guidance. Only 4 of 25 school leaders reported that their schools offered career guidance as a standalone, timetabled subject, a proportion significantly below one half (exact binomial $p < 0.001$); 12 reported that it was integrated into other subjects and 12 that it took the form of occasional events such as career days (Table 4). Guidance teachers gave a somewhat different account, with 11 of 24 reporting scheduled career guidance lessons on the timetable (Table 5). This discrepancy between the two staff groups suggests that what counts as "timetabled" guidance is understood differently, and it reinforces the case for a clear, mandated allocation.

Table 4: *Scheduling and Integration of Career Guidance Activities in the School Calendar (School Leaders, N = 25)*

Integration of Career Guidance Activities	Yes, n (%)	No, n	p value
As a standalone, timetabled subject/lesson	4 (16)	21	<0.001
Integrated into other subjects (e.g. civic education)	12 (48)	13	1.000
Held as occasional events (e.g. career days, once per term)	12 (48)	13	1.000
Only when requested by pupils or teachers	2 (8)	23	<0.001
Not Scheduled	2 (8)	23	<0.001

Note. p values are from two-sided exact binomial tests of the proportion answering "yes" against 0.5. Respondents could select more than one option.

Guidance teachers identified this lack of formal scheduling as a central obstacle to effective delivery, and 15 of 24 cited insufficient time on the timetable as a barrier. One teacher explained, "*The problem is that we only chance meeting the pupils, career guidance is not timetabled*" (GT2), while another noted, "*There is no availability of time…If the time can be enough to meet everyone's needs, it would be a plus for me*" (GT3). Headteachers echoed the call for structural reform; one emphasised that "*Career guidance and counselling should be introduced as a subject on its own and timetabled to be taught in all schools as opposed to just holding intermittent career guidance workshops*" (HT3).

This structural gap is reflected in the pedagogical limitations observed in practice. As Table 5 shows, delivery relied on one-to-one sessions and group talks, while sustained, developmental and experiential activities were uncommon; these are examined under Pedagogical Barriers below.

Table 5: *Career Guidance and Counselling Activities Reported by Guidance Teachers (N = 24)*

Activity	Yes, n (%)	No, n	*p*
Scheduled career guidance lessons on the timetable	11 (46)	13	0.839
One-on-one career counselling sessions	22 (92)	2	**<0.001**
Group guidance sessions / workshops	21 (88)	3	**<0.001**
Organizing career fairs or guest-speaker talks	17 (71)	7	0.064
Arranging workplace visits or job shadowing	6 (25)	18	**0.023**
Providing information on universities / TEVET colleges	16 (67)	8	0.152
CV writing and interview-skills workshops	3 (13)	21	**<0.001**
Distributing printed career materials (posters, booklets)	8 (33)	16	0.152
Using online career platforms / resources	6 (25)	18	**0.023**
Engaging with parents on career issues	12 (50)	12	1.000

Note. p values are from two-sided exact binomial tests of the proportion answering "yes" against 0.5; values below 0.05 are shown in bold.

These pedagogical limitations are not simply matters of professional choice; they are closely tied to staffing arrangements. As Figure 8 shows, 20 of 25 school leaders (80%) reported that career guidance was delivered by

a teacher with part-time guidance responsibilities, and only 7 (28%) reported a dedicated, full-time guidance and counselling teacher.

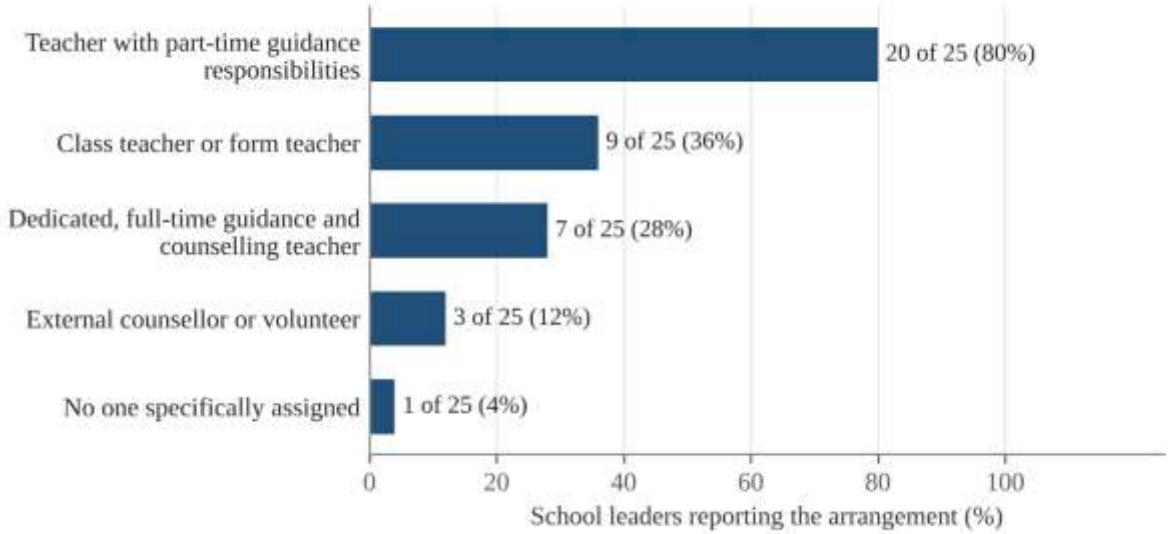


Figure 8: *Personnel Responsible for Delivering Career Guidance Services (School Leaders, N = 25)*

With so few dedicated personnel, sustained developmental engagement with pupils is difficult to achieve, and guidance tends to be reduced to episodic, generic interventions.

The link between institutional conditions and pedagogical practice documented here is consistent with patterns identified in earlier Zambian research (Kabombo et al., 2025; Malinda & Mandyata, 2021), and extends that research by showing how institutional deficits and pedagogical limitations co-occur in Ndola. Where guidance is marginalised and guidance teachers carry full teaching loads alongside counselling responsibilities, generic delivery is less a pedagogical choice than a consequence of the system. From a Capability Approach perspective, these institutional deficits constitute negative conversion factors. Even where the policy resource of career guidance exists, the absence of timetabled sessions, dedicated staff and material resources hinders pupils from converting that resource into the capability for informed career exploration. The resource is present in name but largely absent in function.

Socio-Economic Barriers

Socio-economic constraints were closely associated with pupils' career possibilities. As Figure 4 showed, lack of money for further study, lack of helpful contacts and fear of unemployment were among the barriers most frequently reported by pupils. The open-ended responses illustrate these realities: "*My mom does not work, and my dad has passed away so money for my school is my biggest challenge*" (Pupil 15).

Access to career guidance was unequally distributed. Overall, 40% of pupils (224 of 559) reported having attended at least one career talk or guidance session. Access differed significantly by school type ($\chi^2(2) = 29.56$, $p < 0.001$, Cramér's $V = 0.23$): 31% of pupils in government schools reported access, compared with 51% in grant-aided schools and 58% in private schools. In bivariate analysis, access was also associated with age group ($\chi^2(1) = 5.67$, $p = 0.017$, $V = 0.10$), parental education ($\chi^2(4) = 12.13$, $p = 0.016$, $V = 0.15$) and parental employment ($\chi^2(3) = 12.07$, $p = 0.007$, $V = 0.15$), with the lowest access among pupils whose parents had primary education or less (27%) or were unemployed (26%). Access was not associated with gender ($\chi^2(1) = 0.53$, $p = 0.467$).

Table 6 presents the multivariable logistic regression model. The model was statistically significant (likelihood-ratio $\chi^2(11) = 45.79$, $p < 0.001$) and fitted the data adequately (Hosmer–Lemeshow $\chi^2(8) = 4.14$, $p = 0.844$), although its explanatory power was modest (Nagelkerke $R^2 = 0.11$; AUC = 0.67, 95% CI: 0.62–0.72). No multicollinearity was detected (all variance inflation factors below 2.2). After adjustment, school type was the characteristic most strongly associated with access. Pupils in government schools had 61% lower odds of having

received career guidance than pupils in private schools (AOR = 0.39, 95% CI: 0.23–0.66, p < 0.001), whereas pupils in grant-aided schools did not differ significantly from those in private schools (AOR = 0.85, 95% CI: 0.48–1.49, p = 0.564). Pupils whose parents ran their own business had higher odds of access than those whose parents held a formal job (AOR = 1.59, 95% CI: 1.04–2.42, p = 0.031). The bivariate associations with age, lower parental education and parental unemployment were attenuated and were no longer statistically significant once school type was taken into account, which is consistent with socio-economic disadvantage being concentrated in government schools.

Table 6: *Multivariable Logistic Regression of Factors Associated with Pupil-Reported Access to Career Guidance (n = 556)*

Variable	B	SE	Wald	p value	AOR	95% CI
School type (reference: private)						
Government	−0.937	0.265	12.46	<0.001	0.39	0.23–0.66
Grant-aided	−0.166	0.288	0.33	0.564	0.85	0.48–1.49
Gender (reference: male)						
Female	−0.225	0.184	1.50	0.220	0.80	0.56–1.14
Age group (reference: 16–18 years)						
19 years and above	−0.399	0.292	1.87	0.172	0.67	0.38–1.19
Parental education (reference: university)						
College or vocational	0.442	0.283	2.44	0.118	1.56	0.89–2.71
Secondary	−0.145	0.246	0.35	0.555	0.86	0.53–1.40
Primary or less	−0.348	0.423	0.68	0.410	0.71	0.31–1.62
Not sure	−0.297	0.313	0.90	0.343	0.74	0.40–1.37
Parental employment (reference: formal job)						
Runs own business	0.463	0.215	4.64	0.031	1.59	1.04–2.42
Casual, informal or other work	−0.050	0.339	0.02	0.882	0.95	0.49–1.85
Unemployed	−0.155	0.350	0.20	0.658	0.86	0.43–1.70
Constant	0.260	0.271	0.92	0.338	1.30	–

Note. Outcome: pupil reported having attended at least one career talk or guidance session (223 of 556 pupils with complete data). B = regression coefficient; SE = standard error; AOR = adjusted odds ratio; CI = confidence interval. Model: likelihood-ratio $\chi^2(11) = 45.79$, $p < 0.001$; −2 log likelihood = 703.1; Cox and Snell $R^2 = 0.08$; Nagelkerke $R^2 = 0.11$; Hosmer–Lemeshow $\chi^2(8) = 4.14$, $p = 0.844$; AUC = 0.67; 65.1% of cases correctly classified.

This finding indicates that institutional inequities map onto existing socio-economic stratification, reproducing and not mitigating structural disadvantage (Kabombo et al., 2025; Nyirongo, 2023). Two cautions apply. The estimate describes an association in cross-sectional data and does not show that attending a government school causes lower access. In addition, pupils were sampled within 15 schools, and the dataset did not allow clustering by school to be modelled, so the confidence intervals are likely to be narrower than the design warrants.

These constraints intersect with strong socio-cultural pressures. All 25 school leaders reported that parental aspirations influenced pupils' decisions, and almost all of the 24 who answered the remaining items reported an influence of socio-economic status (23), peer pressure (23) and gender stereotypes (22). All 24 guidance teachers likewise indicated that parental aspirations, peer pressure, socio-economic status and perceived job availability shaped pupils' decisions, and 23 reported an influence of gender stereotypes. Guidance teachers nevertheless rated gender stereotypes as the weakest of these influences: only 8 of 24 considered their influence strong or very strong, compared with 20 for socio-economic status, 18 for peer pressure and 15 for parental aspirations. Gender stereotypes were thus recognised by almost all staff but ranked below economic and family pressures.

Parents and guardians asked for more career counselling at school (45%), financial guidance (43%) and clearer information on university and college entry requirements (39%) (n = 49), and, as their comments quoted earlier show, they expressed an explicit desire for partnership. This pattern suggests that engaging families as partners, and not viewing them solely as obstacles, could help to turn a currently constraining influence into a positive conversion factor.

Pedagogical Barriers

The pedagogical approaches available to guidance teachers were shaped by the institutional constraints described above. As Table 5 shows, one-to-one counselling sessions and group workshops were frequently reported, whereas interactive and experiential methods remained rare: only 6 of the 24 guidance teachers arranged workplace visits or job shadowing, 6 used online career platforms and 3 ran CV-writing or interview-skills workshops, and only 1 of 25 school leaders reported the use of career assessment tools.

Pupils criticised this lack of personalisation, describing the guidance they received as "*too general*" and *"not individualized"* (Pupil 14) and *"motivational talks, not real guidance"* (Pupil 16). The infrequency of activities was also highlighted. Pupil 17 wrote, *"It only happens like 2-3 times a year…You cannot build career awareness like that."* Headteachers also acknowledged these limitations, with one emphasising that career awareness *"cannot be left to Grade 12 when choices have already been made"* (HT4) while another observed, *"Without proper career assessment tools, we are only giving them general information"* (HT5). Guidance teachers, in turn, called for more interactive approaches, stating that *"Once-off talks are not enough, they need continuous exposure"* (GT4) and asking for *"a structured program where pupils can visit workplaces and see professionals in action"* (GT5).

These practitioner perspectives indicate that the pedagogical limitations stem less from professional ignorance than from incapacity within current resource constraints. From a Capability Approach perspective, negative environmental conversion factors (institutional deficits) appear to generate further constraints at the level of practice (pedagogical limitations). Pupils are thereby denied not only access to guidance but also the quality of guidance that would enable them to develop the self-knowledge, reflective skills and decision-making capabilities needed for informed career choice.

The Interlocking Nature of Barriers

The findings indicate that institutional, socio-economic and pedagogical barriers do not operate in isolation but form an interlocking set of constraints. Institutional deficits appear to limit capacity and to favour generic pedagogical approaches, and pupils encounter these limitations alongside substantial socio-economic barriers. The effects appear to compound one another and not simply to add up. A comparative regional perspective helps to situate the Zambian case. The barriers documented in Ndola include financial absence, capacity failure, structural marginalisation and inadequate depth, which correspond to the configurations identified in Kenya (Lwangu et al., 2020), Uganda (Otwine et al., 2022), Botswana (Ndiane & Iloanya, 2025) and South Africa (Farao & du Plessis, 2024). The Ndola findings suggest that all four configurations can operate simultaneously within a single context, producing a compound set of negative conversion factors. This distinguishes the present case from accounts in which a single type of barrier predominates and implies that policy responses directed at a single barrier are unlikely to be sufficient.

Viewed through Sen's (1999) Capability Approach, these findings indicate a layered conversion failure. Environmental conversion factors, specifically institutional resource deficits, constrain the quality and consistency of guidance. Social conversion factors, such as parental expectations, financial precarity and labour market anxiety, constrain pupils' capacity to act on guidance. Personal conversion factors, such as low confidence and internalised self-censorship, constrain pupils' psychological readiness to pursue their aspirations. These levels appear to reinforce one another: institutional deficits are associated with superficial guidance that is unlikely to build the confidence or self-knowledge needed to withstand socio-economic pressures. Reform must therefore be integrated across the institutional, socio-economic and pedagogical dimensions if pupils' real freedom to choose careers they have reason to value is to expand.

Integration of Quantitative and Qualitative Findings

Table 7 brings the two strands together. For the first research question, the strands were largely convergent: the low proportions of pupils reporting benefit were matched by pupils' accounts of generic and infrequent guidance, and the qualitative strand added an explanation, namely that family authority and cost overrode guidance where it was received. The principal discrepancy lay between stakeholder groups and not between methods: school leaders, guidance teachers and parents rated the effect of guidance far more favourably than pupils did. For the second research question, the qualitative strand complemented the quantitative results by showing how the absence of timetabled time, part-time staffing and limited resources translated into the once-off, generic delivery that pupils described.

Table 7: *Joint Display Integrating Quantitative and Qualitative Findings*

Domain	Quantitative finding	Qualitative finding	Integration
Effect of guidance on pupils' decisions (research question 1)	10% of pupils reported increased confidence and 5% changed their plans; 82% reported parental influence against 29% for school counsellors or teachers.	Aspirations overridden by family expectations and cost (Pupils 1–7).	Convergent; the qualitative strand explains the low impact.
Stakeholder views of effectiveness (research question 1)	19 of 25 school leaders rated CGC effective; 22 of 24 guidance teachers and 60% of parents perceived gains in pupils' confidence, against 10% of pupils.	Staff acknowledged that parental direction limits the effect of guidance (HT1, HT2, GT1).	Discrepant across stakeholder groups; staff comments partly reconcile the difference.
Access and scheduling (research question 2)	60% of pupils had never attended a career talk; 4 of 25 school leaders reported timetabled CGC; government schools AOR = 0.39 (95% CI: 0.23–0.66).	Guidance described as untimetabled and dependent on chance contact (GT2, GT3, HT3) and as held two or three times a year (Pupil 17).	Convergent.
Socio-economic barriers (research question 2)	80% of pupils reported lack of money, 82% lack of helpful contacts and 81% fear of unemployment as problems.	No sponsor, no one to help and doubts about finding work (Pupils 8–12, 15).	Convergent.
Pedagogical barriers (research question 2)	6 of 24 guidance teachers arranged workplace visits and 3 ran CV-writing workshops; 1 of 25 school leaders reported career assessment tools.	Guidance described as "too general" and as "motivational talks" (Pupils 14, 16); staff asked for continuous, experiential approaches (GT4, GT5, HT5).	Complementary; the qualitative strand shows how limited methods are experienced.

CONCLUSION

This study examined the effectiveness of career guidance interventions and the barriers shaping their delivery and uptake among Grade 12 pupils in Ndola District, Zambia, using Sen's Capability Approach as its interpretive lens.

Summary of Findings

On the evidence of this study, career guidance interventions in Ndola District had a limited effect on pupils' career decisions. Only 10% of pupils reported increased decision-making confidence from school guidance, and

5% had changed their career plans as a result. Career decision-making was dominated by external influences: parents (82%), family finances (78%), anticipated examination results (75%), friends (75%) and gender stereotypes (71%), whereas school counsellors or teachers were cited as an influence by only 29% of pupils.

Access was limited and unequal. Sixty per cent of pupils had never attended a career talk, and pupils in government schools had 61% lower odds of having received career guidance than pupils in private schools (AOR = 0.39, 95% CI: 0.23–0.66). Institutional deficits were pervasive: only 4 of 25 school leaders reported that CGC was timetabled, 20 of 25 reported delivery by teachers with part-time guidance roles, and essential resources were largely absent.

Socio-economic barriers compounded these weaknesses. Lack of money was reported as a problem by 80% of pupils, not knowing the right people to help by 82%, fear of not finding a job by 81% and not knowing the steps to take by 84%. Pedagogically, delivery was dominated by generic career talks and one-to-one sessions that pupils experienced as general and not individualised, with little experiential learning. The qualitative data revealed a pervasive conflict between pupils' aspirations and family expectations, illustrating how socio-cultural pressures can override school-based guidance.

Interpreted through Sen's Capability Approach, these findings indicate a layered conversion failure in which institutional deficits (environmental conversion factors), social pressures (social conversion factors) and low confidence and self-censorship (personal conversion factors) appear to reinforce one another, so that career guidance does not function as the social opportunity it is intended to be.

Implications

The findings carry six implications. First, effectiveness cannot be assumed from service provision alone; schools should track pupil-level outcomes. Second, guidance should engage parents as partners, given their dominant influence on pupils' decisions. Third, institutional conditions, including timetabled sessions, trained CGC personnel and adequate resources, are foundational prerequisites. Fourth, reform should be coordinated across institutional, socio-economic and pedagogical dimensions because the barriers reinforce one another. Fifth, pedagogical approaches should shift from passive information delivery to interactive capability-building. Sixth, equity-sensitive resourcing is essential, as pupils in government schools are disproportionately disadvantaged.

RECOMMENDATIONS

Five interconnected reforms are recommended. First, the Ministry of Education should mandate timetabled CGC as a core curriculum component, with at least one weekly period for all pupils from Grade 8 to Grade 12, and District Education Boards and education standards officers should monitor compliance with the same accountability that is applied to examinable subjects.

Second, the Ministry of Education, in partnership with teacher education institutions, should professionalise the CGC workforce by embedding assessed CGC modules in pre-service programmes, establishing a nationally accredited continuing professional development pathway with competency-based certification for serving teachers, and creating funded District Career Guidance Coordinator posts to provide supervision and mentorship.

Third, guidance teachers should shift from passive information delivery to interactive capability-building by using career interest inventories, aptitude instruments, structured self-reflection exercises, workplace visits and alumni panels to foster individualised self-understanding and decision-making agency.

Fourth, schools should establish parent–school dialogue workshops and ongoing communication channels to equip parents with labour market information and strategies for supporting autonomous decision-making.

Fifth, the Ministry of Education should deploy trained, full-time guidance counsellors to every school, with ring-fenced funding for up-to-date career materials, assessment tools and reliable internet access. Together, these reforms move beyond piecemeal adjustment to address the multi-level conversion failures documented in this study and to expand pupils' real freedom to pursue careers they have reason to value.

Limitations

First, the design was cross-sectional: the findings describe associations at a single point in time and cannot establish that career guidance, or its absence, caused the outcomes reported, nor can they capture change over time. Second, the study relied on self-reported data, which carry risks of social desirability and recall bias, and perceived effectiveness was measured with study-specific questionnaire items and not with a validated career decision-making scale. Third, the samples of school leaders, guidance teachers and parents were small and purposive, so results for these groups are descriptive and should not be generalised. Fourth, the move from paper to online questionnaires for parents may have restricted that sample to those with smartphone and internet access. Finally, the qualitative strand drew on written open-ended responses, which offer less depth than interviews. Despite these limitations, the multi-source data and mixed-methods design support the credibility of the findings and their transferability to comparable Zambian settings.

Suggestions for Further Research

First, a longitudinal study tracking a cohort from Grade 8 to Grade 12 would capture developmental trajectories and allow stronger inference about the effects of guidance. Second, intervention-based action research should evaluate specific reforms such as validated interest inventories, parent engagement programmes and digital career platforms. Third, a national comparative analysis across school types and districts, with schools modelled as clusters, would inform equitable resource allocation.

Data Availability Statement

The anonymised datasets generated and analysed during this study are available from the corresponding author on reasonable request.

Generative AI Statement

During the preparation of this manuscript, the authors used DeepSeek and Claude to improve readability and language, mainly by removing redundancies without altering the original meaning. All data and interpretations are the authors' own; the authors reviewed and edited all AI-assisted modifications and take full responsibility for the content of this manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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