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Forecasting the Employment Status of Persons with Hearing Impairment in Cameroon in Six Years: A GCE Ordinary Level Performance-Based Analysis

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Abstract

Unemployment among persons with hearing impairment remains disproportionately high in Cameroon despite decades of disability-inclusion policy. This study forecasts the employment status of persons with hearing impairment in Cameroon over a six-year horizon, combining a longitudinal analysis of General Certificate of Education (GCE) Ordinary Level performance (2020-2025) with current global employment trends. Using examination records of candidates with hearing impairment, pass was defined as grades A, B, or C in at least four subjects; D, E, and U were fail grades. Results show an overall six-year pass rate of 34.5%, rising from a low of 20% in 2021 and 2023 to 75% in 2024, with English Language and History returning a 0% pass rate throughout, while Mathematics, Computer Science, and the sciences performed comparatively better. A linear trend projection, read cautiously given the small cohort, suggests continued improvement through 2032, but this alone is unlikely to translate into employment gains: nationally representative data show deaf adults employed at markedly lower rates than hearing adults, and Cameroon's disability unemployment rate sits far above the national average. The study concludes that without deliberate investment in sign-language-accessible technical and vocational pathways, assistive and AI-driven communication technologies, and inclusive employer practices, the forecasted academic gains will not close the employment gap by 2032. The article offers evidence-based counseling guidance for candidates with hearing impairment preparing for the GCE and policy recommendations for examination and employment authorities.

Keywords: hearing impairment, GCE Ordinary Level, employment forecast, Cameroon, disability inclusion, deaf employment

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Introduction

Hearing impairment is one of the most prevalent sensory disabilities worldwide, and its intersection with education and employment outcomes remains a persistent development concern, particularly in low- and middle-income countries such as Cameroon. Globally, hundreds of millions of people live with disabling hearing loss, and nationally representative evidence consistently shows that deaf and hard-of-hearing adults are employed at substantially lower rates than their hearing counterparts (Garberoglio et al., 2019). In Cameroon, the challenge is compounded by weak implementation of disability-inclusive education and employment legislation, limited access to sign-language interpretation and assistive technology, and lingering social stigma that constrains the labour-market participation of persons with disabilities generally, and persons with hearing impairment specifically (UNPRPD, 2023).

Examination performance at the secondary-school level is widely regarded as a leading indicator of subsequent labour-market outcomes, because it certifies the literacy, numeracy, and subject-specific competencies that employers and post-secondary institutions use as screening criteria. In Cameroon, the General Certificate of Education (GCE) Ordinary Level, administered by the Cameroon GCE Board, is the terminal secondary-level qualification for the Anglophone sub-system of education. For a candidate to be certified as having passed the GCE Ordinary Level, the candidate must obtain grades A, B, or C in at least four subjects; grades D, E, and U are fail grades regardless of the number of subjects attempted. This threshold matters directly for employment because many entry-level jobs, technical and vocational training programmes, and further-education pathways in Cameroon specify the GCE Ordinary Level "in at least four subjects including English Language and/or Mathematics" as a minimum entry requirement.

Cameroon operates a bilingual education system in which the Anglophone (English-medium) sub-system culminates in the GCE Ordinary and Advanced Levels, administered by the Cameroon GCE Board, while the Francophone sub-system culminates in the Brevet d'Études du Premier Cycle and the Baccalauréat. Candidates with hearing impairment in the Anglophone sub-system therefore sit a written, largely English-medium examination regardless of whether English is the language in which they are most fluent, a fact that has direct implications for the subject-level results analysed later in this study. Special-needs education provision in Cameroon has expanded gradually over the past two decades, but sign-language interpretation capacity, teacher training in deaf education, and assistive-listening infrastructure remain unevenly distributed, with better provision in urban than rural areas, consistent with the wider shortage of trained sign-language teachers and interpreters documented across Sub-Saharan Africa (Lutalo-Kiingi & De Clerck, 2017).

For candidates with hearing impairment, the pathway from examination to employment is shaped by at least three interacting forces. First, the candidate's own examination performance, which determines whether the certification threshold that many employers use as a filter is met. Second, structural and attitudinal barriers in the Cameroonian labour market that depress employment rates for persons with disabilities independently of qualification level (UNPRPD, 2023). Third, global employment trends, including the rapid diffusion of artificial-intelligence-driven captioning and communication tools, the growth of remote and asynchronous digital work, and international disability-inclusion frameworks, are reshaping which occupations are realistically accessible to persons with hearing impairment (Glasser et al., 2017; Schur et al., 2020). A forecast of employment status that accounts only for examination trends, while ignoring these global shifts, would be incomplete; equally,

a forecast built only on global trends without grounding in the concrete academic performance of Cameroonian candidates with hearing impairment would lack local validity. This study attempts to combine both.

Statement of the Problem

There is a high rate of unemployment in Cameroon among persons with hearing impairment. Anecdotal and institutional evidence suggests that many candidates with hearing impairment either do not meet the GCE Ordinary Level pass threshold or, when they do, are still unable to convert certification into employment because of interpretation gaps, employer reluctance, and a narrow range of occupations perceived as "deaf-friendly." Without an evidence-based forecast that links current examination performance trends to global employment trajectories, examination authorities, special-needs educators, and career counselors in Cameroon lack the information needed to prepare candidates with hearing impairment for the realistic labour-market conditions they will face several years after sitting the examination. This study addresses that gap.

Research Objectives

1. To forecast the employment status of persons with hearing impairment in Cameroon in six years, given their performance in the Cameroon GCE Ordinary Level.

2. To counsel candidates with hearing impairment going into the GCE examinations based on current worldwide trends in employment.

Research Questions

1. What has been the trend in GCE Ordinary Level performance among candidates with hearing impairment in Cameroon between 2020 and 2025?

2. Which subjects present the greatest opportunities and the greatest obstacles for candidates with hearing impairment?

3. Based on the observed performance trend and current global employment trends, what is the likely employment status of persons with hearing impairment in Cameroon by 2032?

4. What counseling and policy guidance follows from this forecast for candidates, parents, teachers, and examination authorities?

Research Questions 1 through 3 serve Objective 1, building the performance-based forecast from the exam evidence; Research Question 4 serves Objective 2, translating that forecast into counseling guidance for candidates and policy guidance for examination and employment authorities.

Literature Review

Hearing Impairment, Education, and Certification

Hearing impairment affects access to spoken instruction, oral assessment components, and classroom communication in ways that can depress measured academic performance even where cognitive ability is unaffected. Research on deaf education across Sub-Saharan Africa documents a persistent

shortage of trained sign-language teachers and interpreters and inconsistent use of a shared national sign language in instruction and assessment, both of which widen the gap between what a student with hearing impairment can do and what a written, language-mediated examination grade shows (Lutalo-Kiingi & De Clerck, 2017). Cameroon's Anglophone GCE Ordinary Level system administers written, largely language-mediated examinations; a candidate's fluency in written English, rather than hearing ability per se, substantially determines performance in many subjects, which helps explain differential subject-level outcomes for this population, a point this study returns to in the Discussion when interpreting the English Language results.

Global Employment Trends for Persons with Hearing Impairment

Nationally representative data consistently show a substantial employment gap for deaf and hard-of-hearing people. In the United States, the most recent national report from the National Deaf Center on Postsecondary Outcomes finds that only 53% of deaf adults aged 18 to 64 are employed, compared with 76% of hearing adults, a gap that persists even as deaf adults' educational attainment has risen (Garberoglio et al., 2019). Deaf workers who do find employment are also more likely to be concentrated in jobs with limited scope for career advancement than hearing counterparts with comparable qualifications (Boutin, 2009). These patterns from a high-income country with comparatively strong disability-rights enforcement suggest that the employment gap in a lower-middle-income country such as Cameroon, where such enforcement is weaker, is likely to be at least as large, and probably larger.

At the same time, several converging global trends could narrow this gap over the medium term. Automatic speech recognition (ASR) and AI-driven captioning tools have improved rapidly; controlled studies comparing deaf, hard-of-hearing, and hearing users find that, while recognition accuracy for deaf speakers still lags behind that for hearing speakers, modern ASR captioning substantially lowers the communication barrier in everyday conversation and meetings compared with no captioning at all (Glasser et al., 2017). Universities and technology developers are also building next-generation captioning-correction systems that combine ASR with large language models to improve accuracy in technical, multi-speaker, and noisy settings (University of Michigan, 2025). Separately, peer-reviewed research on the shift toward remote and hybrid work, accelerated since the early 2020s, finds that increased access to home-based and flexible work arrangements is associated with improved employment opportunities for workers with disabilities, including those for whom unmediated spoken communication in a shared office was previously a barrier (Schur et al., 2020). Employers who default to captioned video meetings and written, asynchronous collaboration tools, rather than treating these as special accommodations, lower the practical cost of employing a worker with hearing impairment for a growing share of knowledge-economy occupations (Schur et al., 2020). Whether this shift reaches Cameroonian employers within the six-year horizon of this study is an open, policy-relevant question addressed further in the Discussion and Recommendations.

Disability and Employment in Cameroon and Sub-Saharan Africa

Persons with disabilities in low- and middle-income countries face markedly higher poverty and lower economic participation than the non-disabled population (UN Enable, n.d.). Using internationally comparable survey data across fifteen developing countries, including Cameroon, Mitra, Posarac, and Vick (2013) found that disability is significantly associated with higher multidimensional poverty, lower economic well-being, and reduced labour-force participation, with Cameroon among the countries

showing a pronounced disability-related employment gap. In Cameroon specifically, situational analyses point to negative societal perceptions, unequal access to quality education, and limited vocational training access as the principal drivers of exclusion from employment (UNPRPD, 2023). Comparative African evidence from Ghana shows that employed persons with disabilities are disproportionately concentrated in vulnerable, informal, low-paying work rather than stable salaried employment, with discrimination the most frequently cited barrier (Naami, 2015). Cameroon's overall national unemployment rate is comparatively low by international standards, at roughly 3.6% in 2025 (Statista, 2025), but this figure masks much higher joblessness, underemployment, and informal work among persons with disabilities, including those with hearing impairment, whose outcomes are not separately tracked in most national labour-force statistics.

Vocational Education, Training, and Skills Pathways

Beyond formal certification, the availability of vocational education and training (VET) pathways shapes whether persons with hearing impairment can convert exam outcomes into marketable skills. Evidence from low- and middle-income countries indicates that limited access to vocational training, more than exam performance alone, is repeatedly cited as a direct cause of under-skilling and unemployment among persons with disabilities (Mitra et al., 2013; Naami, 2015; UNPRPD, 2023). Where VET programmes exist, they have historically clustered persons with hearing impairment into a narrow set of trades, such as tailoring, carpentry, and craft production, rather than the quantitative and digital-skills pathways this study's data show this population can perform comparatively well in. Expanding VET access into Mathematics-linked, digital, and technical trades is therefore a recurring recommendation this study's subject-level findings directly support.

Theoretical Framework

This study is informed by two complementary theoretical perspectives. Human capital theory, originating with Becker's (1964) foundational analysis of education and training as investments that raise individual productivity and lifetime earnings, holds that employability is a function of accumulated education, skills, and certified competencies; under this view, GCE Ordinary Level performance is a direct, measurable input into future employment prospects, which justifies using examination trends as a forecasting anchor. The social model of disability, articulated by Oliver (1990), takes a different starting point: it locates disability not in the individual's impairment but in the barriers, physical, communicative, attitudinal, and institutional, that a disabling environment erects; under this view, two candidates with identical certified human capital can have very different employment outcomes, depending on whether employers and workplace technology accommodate hearing impairment. The frameworks are complementary here: human capital theory explains why the exam trend is a necessary forecasting input, while the social model explains why that trend alone is insufficient, and why global accessibility-technology and employer-practice trends must also be incorporated.

Synthesis

Taken together, the literature suggests that a forecast for Cameroonian candidates with hearing impairment must weigh three forces at once: a domestic exam-performance trend within candidates' and educators' control; a well-documented global employment gap tied specifically to hearing loss (Garberoglio et al., 2019; Mitra et al., 2013); and accessibility-technology and remote-work trends that could, if adopted in Cameroon, disproportionately benefit this population by 2032 (Glasser et al., 2017;

Schur et al., 2020). No published Cameroonian study to date combines longitudinal GCE Ordinary Level data for candidates with hearing impairment with these global trends into a subject-specific forecast; this study addresses that gap.

Methodology

Research Design

This study adopts a mixed-methods, forecasting research design. Quantitative trend analysis of secondary examination data is combined with a qualitative synthesis of published global and regional employment literature to produce a triangulated six-year forecast, following established practice in labour-market forecasting where statistical extrapolation is deliberately tempered by contextual and policy-relevant qualitative evidence rather than treated as a stand-alone prediction. This tempering matters particularly here, given the small annual examination cohort described below, and is discussed further in the Limitations section.

Data Source and Sample

The quantitative data for this study comprise official Cameroon GCE Ordinary Level subject-level results for candidates recorded as having a hearing impairment, covering six consecutive examination sessions from 2020 to 2025. The dataset contains 251 subject-level entries across 29 candidate-year records (29 individual instances of a candidate sitting the examination in a given year), spanning thirteen subjects, including English Language, French, Mathematics, Economics, Geography, Citizenship Education, Computer Science, History, Food and Nutrition, Commerce, Chemistry, Physics, and Logic. Between four and seven candidates with hearing impairment sat the examination in any given year, consistent with the generally small population of certified candidates with hearing impairment presenting for the GCE Ordinary Level nationally. This small cohort size is treated as a central methodological constraint throughout the analysis below, rather than a caveat appended only at the end.

Operational Definitions

Consistent with the Cameroon GCE Board's grading and certification convention specified for this study, a subject-level pass was defined as a grade of A, B, or C. Grades D and E, together with U (unclassified/fail), were treated as fail grades. A candidate was classified as having an overall pass in a given examination year if the candidate obtained a pass grade (A, B, or C) in at least four subjects in that sitting, regardless of the total number of subjects attempted. Candidates who passed in fewer than four subjects, including those with zero passes, were classified as an overall fail for that sitting. Entries recorded with a grade of "X" were treated as absent or otherwise unclassified and were excluded from the pass/fail computation for the affected subject while remaining in the descriptive subject-participation counts.

Reliability, Validity, and Ethical Considerations

The examination data used in this study derive from official GCE Ordinary Level subject-level records, which are the authoritative source for certification outcomes in Cameroon and are therefore treated as reliable for the purpose of computing pass rates under the operational definitions specified above.

Construct validity for the employment forecast rests on the assumption, supported by human capital theory and consistent with the literature reviewed above, that certified examination attainment is a meaningful, though not sufficient, predictor of subsequent employability. No candidate-identifying information is reported in this study; results are presented only in aggregate, by year and by subject, consistent with standard ethical practice for the secondary analysis of examination records.

Data Analysis Procedure

Subject-level and candidate-level pass rates were computed for each examination year using the operational definitions above. Year-on-year overall pass rates were computed as the proportion of candidates in that year classified as an overall pass. A linear ordinary-least-squares trend line was fitted to the six years of overall pass-rate data (2020-2025) and extrapolated to the target forecast year, 2032, six years beyond the current year at the time of writing (2026), to describe the likely trajectory of academic attainment absent any change in current conditions. Because this rests on only six annual observations drawn from cohorts of four to seven candidates, it is treated throughout as an indicative signal of direction rather than a precise forecast, reported alongside, not instead of, the qualitative scenario analysis in the Discussion. This statistical trend was then checked against the global and regional literature reviewed above to produce the employment-status forecast, rather than reported as a mechanical, uncaveated projection.

Results

Overall Pass-Rate Trend, 2020-2025

Table 1 summarizes the number of candidates with hearing impairment who sat the GCE Ordinary Level in each session and the proportion who met the overall pass threshold of at least four subjects at grade A, B, or C.

Table 1. Overall GCE Ordinary Level Pass Rate among Candidates with Hearing Impairment, 2020-2025

Year	Candidates	Overall Passes	Pass Rate (%)
2020	4	1	25.0
2021	5	1	20.0
2022	4	1	25.0
2023	5	1	20.0
2024	4	3	75.0
2025	7	3	42.9
Total	**29**	**10**	**34.5**

Across the full six-year period, 10 of 29 candidate-year records (34.5%) met the overall pass threshold. The pass rate held in a narrow 20-25% band from 2020 to 2023, before rising sharply to 75% in 2024 and settling at 42.9% in 2025, the year with the largest cohort in the dataset (see Figure 1).

Cohort size varied from four candidates in 2020, 2022, and 2024 to seven in 2025. The 2025 cohort's pass rate of 42.9%, while below the 2024 peak of 75.0%, remained well above the 20-25% band that

characterised 2020-2023, offering tentative support for a genuine, if uneven, improvement in outcomes over the second half of the period studied rather than a single-year anomaly. Because the 2024 cohort was also the smallest in the dataset, its 75.0% pass rate should be interpreted cautiously: with only four candidates, a single additional pass or fail shifts the reported rate by twenty-five percentage points, a volatility characteristic of small-cohort statistics and discussed further in the Limitations.

The linear trend fitted to these six data points is positive, rising by approximately 7.1 percentage points per year on average, which, if extrapolated without adjustment, would project the pass rate crossing 80% by 2030 and exceeding 100% (a statistical impossibility) by 2032. This mechanical extrapolation is not offered as a literal forecast; rather, it signals genuine underlying improvement in recent years while underscoring that the small annual sample size (four to seven candidates per year) makes the year-on-year pass rate highly volatile, and that any single additional year of strong or weak performance would substantially change the fitted trend. Given this volatility, the trend line is used in this study only as a directional signal, not as the forecast itself; the employment-status forecast developed in the Discussion rests on the qualitative scenario analysis, not on the trend line's literal numbers. A more conservative reading of the same data is that the underlying direction of travel is favourable, that 2024 and 2025 represent a genuine improvement over 2020-2023, and that a plausible six-year forecast is a pass rate stabilising somewhere in the 45-65% range by 2032, provided the conditions that produced the 2024-2025 improvement persist or strengthen, rather than the linear model's arithmetically implausible ceiling-breaching projection.

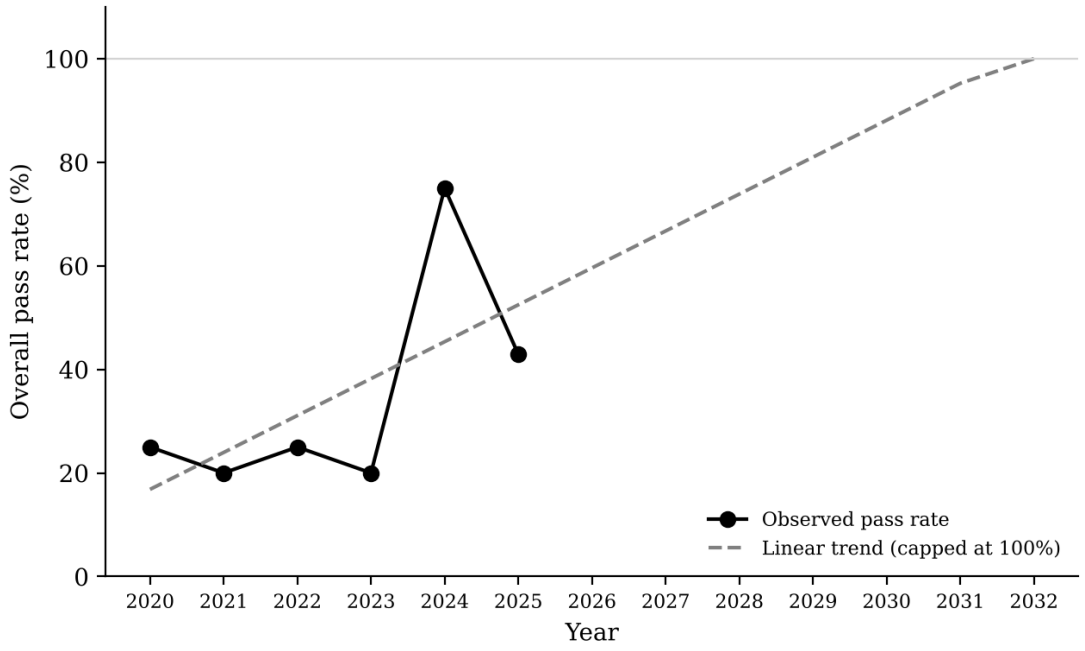


Figure 1. Overall GCE Ordinary Level Pass Rate Trend among Candidates with Hearing Impairment (2020-2025) with a Linear Projection to 2032

Subject-Level Performance

Table 2 and Figure 2 present pass rates by subject, pooled across all six years.

Table 2. Subject-Level Pass Rates Among Candidates with Hearing Impairment, 2020-2025

Subject	Entries	Passes (A-C)	Pass Rate (%)
English Language	29	0	0.0
History	13	0	0.0
Citizenship Education	29	4	13.8
Geography	20	4	20.0
Food and Nutrition	19	6	31.6
Economics	29	16	55.2
French	29	16	55.2
Mathematics	29	18	62.1
Computer Science	25	16	64.0
Chemistry	6	6	100.0
Commerce	4	4	100.0
Physics	6	6	100.0
Logic	2	2	100.0

Two patterns stand out. First, English Language, sat by every candidate in the dataset, returned a 0% pass rate throughout the six years; since English Language is frequently specified by employers and post-secondary programmes as a required pass subject, this single result plausibly does more damage to the employability of this cohort than any other single factor identified in the data. History, also compulsory for many candidates, likewise returned a 0% pass rate. Second, the subjects with the highest pass rates, Chemistry, Physics, Commerce, and Logic, were also the subjects with the fewest entries, indicating that only a small, likely higher-attaining, subset of candidates with hearing impairment opted into (or were permitted to opt into) the science and commercial electives, and that this subset performed strongly where they did. Mathematics and Computer Science, subjects taken by a much larger share of the cohort, also returned comparatively favourable pass rates of 62.1% and 64.0% respectively.

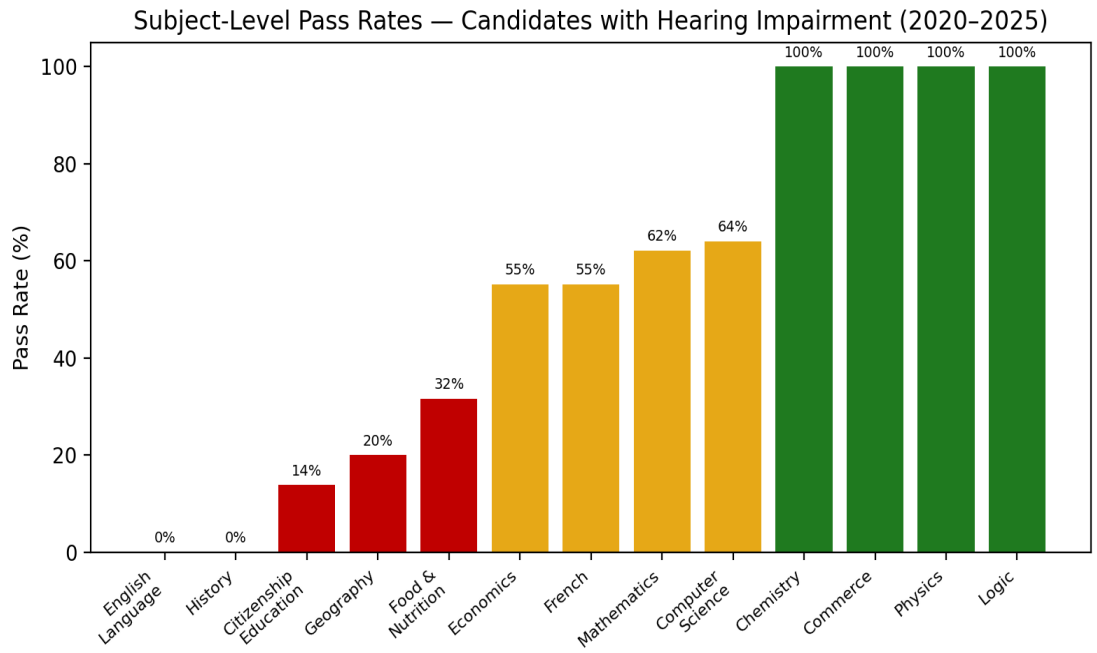


Figure 2. Subject-Level Pass Rates among Candidates with Hearing Impairment, 2020-2025 (Pooled)

Interpretation Relevant to the Forecast

The co-occurrence of near-total failure in English Language, a subject central to certification, employer screening, and everyday workplace communication in Anglophone Cameroon, alongside comparatively strong performance in Mathematics and Computer Science, is the single most important pattern for the employment forecast developed below. It suggests that candidates with hearing impairment in this dataset are not uniformly weak academically; rather, their attainment is concentrated in quantitative and, in the case of the sciences and Logic, symbolic and less language-mediated subjects, and depressed specifically where success depends on written and, in practice, spoken-language-linked fluency in English. This pattern aligns with global evidence that occupations and training pathways emphasising quantitative, technical, and digital skills, precisely the skills profile in which this cohort performs best, are also the pathways best positioned to benefit from AI-assisted communication technology and remote, text-first work culture (Glasser et al., 2017; Schur et al., 2020; University of Michigan, 2025).

The dataset cannot, on its own, distinguish between two explanations for the English Language result: a genuine gap in English attainment among candidates with hearing impairment, or a mismatch between a written, spoken-language-mediated assessment format and candidates whose first language is signed. The regional literature suggests both are plausible: where a shared national sign language is used consistently in instruction and assessment is adapted to a candidate's first-language modality, outcomes in language subjects tend to improve; where such adaptation is absent, as documented more broadly across Sub-Saharan African deaf-education systems, written-language subjects are disproportionately affected relative to subjects relying more on numerical or symbolic reasoning (Lutalo-Kiingi & De Clerck, 2017). This study cannot determine which explanation dominates

from examination records alone, which is why the Recommendations below propose that the Cameroon GCE Board investigate this directly.

Discussion

A Six-Year Employment-Status Forecast

Combining the statistical and literature evidence above, three forecast scenarios are outlined for the employment status of persons with hearing impairment in Cameroon by 2032. Consistent with the caution urged in the Methodology, none of these scenarios treats the linear trend line in Figure 1 as a literal forecast; each instead uses the trend line's general direction as one input alongside the global and regional literature reviewed above.

Baseline (No-Change) Scenario

If current conditions persist unchanged, that is, if the pass rate stabilises in the 45-65% range projected above, if English Language and History stay near-total obstacles, and if Cameroon's broader disability-employment environment does not improve materially, then the employment status of this population in 2032 is likely to resemble current global patterns in weakly enforced disability-employment environments: a majority remaining outside formal, salaried employment, concentrated instead in informal, self-employed, or family-based activity, consistent with the pattern documented for persons with disabilities generally in Cameroon and comparable African contexts (Mitra et al., 2013; Naami, 2015; UNPRPD, 2023). Under this scenario, the modest projected pass-rate improvement would not, by itself, close the employment gap, because certification alone does not resolve the workplace communication barriers, employer attitudes, and lack of accommodation infrastructure that the literature identifies as the primary drivers of disability unemployment.

Improved (Technology- and Skills-Aligned) Scenario

A more optimistic, but plausible, scenario follows if Cameroon's training system, exam support services, and employers increasingly adopt the assistive and AI-driven communication technologies now diffusing globally, including real-time captioning, and if career guidance deliberately channels candidates, where aptitude allows, toward the Mathematics-, Computer-Science-, and science-oriented pathways where this cohort already performs comparatively well. Under this scenario, by 2032 a meaningfully larger share of certified candidates could access digital-economy, technical, and remote-friendly occupations that rely less on spoken English, occupations that global trends suggest will keep expanding (Glasser et al., 2017; Schur et al., 2020). This scenario requires not parity with high-income countries, only that some employers and training institutions adopt low-cost captioning and text-first practices and that career guidance routes candidates toward their demonstrated strengths.

Constrained (Deteriorating) Scenario

A downside scenario is also plausible if the 2024-2025 improvement proves a temporary artefact of an unusually favourable cohort rather than a durable trend, if English Language pass rates remain at zero, and if fiscal pressures cut the already-limited support for special-needs exam services and disability-employment programming. Under this scenario, the employment gap by 2032 could widen rather than narrow, mirroring United States national data showing the deaf employment gap has persisted even

as deaf adults' educational attainment has risen, in a country with far more resources than Cameroon (Garberoglio et al., 2019).

Occupational Implications

The scenarios imply different kinds of jobs. Under the baseline, employment by 2032 is likely to stay concentrated in informal, self-employed, or family-based activity, with only a minority reaching stable salaried roles that need little spoken-language mediation, such as craft production, data entry, or graphic design. Under the improved scenario, the same subject-strength profile could instead support entry into software-adjacent, data-processing, bookkeeping, and technical-drafting roles, which are expanding globally and increasingly compatible with AI-assisted captioning and text-first collaboration (Glasser et al., 2017; Schur et al., 2020; University of Michigan, 2025). The gap between these trajectories is less about candidates' capability, which this study's data already show, than about whether exam support, training design, and employer practice catch up within the forecast window.

Most Likely Trajectory

On balance, the most defensible forecast is a cautious middle path: modest, uneven improvement in GCE Ordinary Level certification rates through 2032, persistent underperformance in English Language unless specifically addressed, and an employment outlook that improves only to the extent that Cameroonian employers, training providers, and exam authorities deliberately adopt the accessibility technologies and skills-aligned guidance already reshaping deaf employment elsewhere. Absent such intervention, the employment gap facing persons with hearing impairment in Cameroon in 2032 will likely remain wide, broadly consistent with the 53% versus 76% employment-rate gap observed among deaf and hearing adults even in better-resourced settings (Garberoglio et al., 2019), and plausibly wider given Cameroon's weaker enforcement environment (UNPRPD, 2023).

This middle path also implies a widening split within the cohort itself, rather than one uniform outcome. Candidates who pass English Language, or who are channelled early into Mathematics-, science-, and Computer-Science-heavy combinations, are forecast to have meaningfully better prospects by 2032 than those who do not: a minority approaching parity with hearing peers in technical and digital work, and a majority remaining in the informal, low-wage, or inactive categories that already characterise disability employment in Cameroon (Mitra et al., 2013; Naami, 2015; UNPRPD, 2023). The recommendations below aim to narrow this split by extending the pathway now open only to the few who took Chemistry, Physics, Commerce, or Logic to many more candidates.

Counseling Implications for Candidates with Hearing Impairment

The second research objective is to counsel candidates with hearing impairment preparing for the GCE Ordinary Level, in light of the performance and employment-trend evidence above. Four counseling priorities follow directly from the findings.

First, candidates, parents, and teachers should treat English Language preparation as the single highest-priority intervention area, precisely because it is both the subject with the worst outcomes in this dataset and the subject most frequently required by employers and further-education programmes as a compulsory pass. Targeted, sign-language-supported English literacy instruction, rather than generic remediation, is indicated, informed by regional evidence on what adapted instruction and assessment can achieve for candidates whose first language is signed (Lutalo-Kiingi & De Clerck, 2017).

Second, career guidance should actively encourage candidates with demonstrated aptitude toward Mathematics, Computer Science, and, where accessible, the science electives, since these are both the subjects in which this cohort already performs comparatively well and the skill areas most aligned with digital-economy occupations, remote work, and roles compatible with AI-assisted captioning and text-first communication tools (Glasser et al., 2017; Schur et al., 2020).

Third, candidates should be counseled, realistically, that certification alone will not guarantee employment, and that building familiarity with workplace accessibility technology (captioning applications, text-based collaboration platforms, and video-relay or remote-interpretation services) before entering the labour market is a practical, low-cost way to improve employability that does not depend on policy change.

Fourth, given the small size of the current examinee cohort and the volatility this creates in aggregate outcomes, individualised guidance, based on each candidate's specific subject-combination profile rather than cohort averages, is likely to be more useful than generic advice, and examination and special-needs support services should be resourced accordingly.

Recommendations

The findings support the following recommendations.

To the Cameroon GCE Board and Ministry of Secondary Education: review English Language and History assessment delivery for candidates with hearing impairment, including sign-language-mediated instruction and accommodations during preparation and assessment, to determine whether the near-total failure rate reflects a genuine attainment gap or a mismatch between a spoken-language-mediated format and candidates whose first language is signed, and pilot targeted remediation accordingly.

To special-needs education providers and schools: expand access to Mathematics, Computer Science, and science subject combinations for candidates with hearing impairment, given their comparatively strong performance here, rather than defaulting such candidates into a narrower set of subjects by convention.

To employers, training providers, and industry associations: adopt low-cost captioning, text-first communication, and remote-collaboration practices as standard rather than exceptional accommodations; the peer-reviewed evidence above suggests this can materially widen the range of occupations realistically accessible to workers with hearing impairment.

To parents and guardians: engage early with career guidance to identify each candidate's subject strengths, and advocate for sign-language-supported instruction, particularly in English Language, given its outsized influence on certification and hiring.

To national statistical and labour-market authorities: begin disaggregating employment outcomes by disability type in national labour-force surveys, since the absence of Cameroon-specific data for persons with hearing impairment was a significant constraint on this study.

To researchers: replicate this analysis once a larger multi-year candidate cohort becomes available, since the present dataset's small annual cohort size limits how far the trend line and scenario forecasts can be generalised.

Limitations

This study has several limitations. The dataset covers a small annual cohort of four to seven candidates with hearing impairment per year, which limits the statistical reliability of year-on-year trend estimates and means the linear extrapolation in the Results should be read as an indicative signal of direction, not a precise or stand-alone forecast; this is why the Discussion builds its forecast from a qualitative synthesis of scenarios rather than the trend line's literal numbers. The study forecasts employment status by synthesising examination trends with published global and regional literature rather than direct longitudinal tracking of this cohort into the labour market, because Cameroon-specific, disability-type-disaggregated employment data were not available. The global employment statistics cited are drawn predominantly from higher-income settings; more Cameroon-specific data on hearing-impairment employment outcomes would strengthen future analyses. Finally, the dataset does not capture candidates' post-examination trajectories, so the six-year forecast remains an evidence-informed projection rather than an observed outcome; a future longitudinal follow-up of this cohort would allow it to be directly validated.

Conclusion

This study forecasts the employment status of persons with hearing impairment in Cameroon over a six-year horizon by combining GCE Ordinary Level performance data from 2020 to 2025 with current global employment trends. The evidence shows uneven but recently improving examination performance, concentrated strength in Mathematics, Computer Science, and science subjects, and a near-total obstacle in English Language and History. Read against persistent, nationally representative evidence of large employment gaps for deaf and hard-of-hearing adults, and against Cameroon's documented structural barriers to disability employment, the most defensible forecast for 2032 is continued, wide employment disparity unless English Language outcomes improve and unless accessibility technology and skills-aligned career guidance are deliberately adopted. The findings offer both a caution and a concrete opportunity: this cohort's comparative strength in quantitative and technical subjects positions it well to benefit from the AI-driven and remote-work trends reshaping deaf employment globally, provided Cameroonian educators, examination authorities, and employers act deliberately to connect that academic strength to the emerging labour market.

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