



EXAMINATIONS COUNCIL OF ZAMBIA

**2023 PRIMARY SCHOOL (GRADE 7 COMPOSITE) LEAVING EXAMINATION
PERFORMANCE REPORT**

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Foreword

The Examinations Council of Zambia (ECZ) assesses candidates at different educational levels, namely Primary (Grade 7), Junior Secondary (Grade 9), School Certificate (Grade 12), and Teacher Education. These assessments have provided useful information on learning achievement, valuable to teaching and learning, system improvement and policy formulation. It is for this reason that the Examinations Council of Zambia conducts analyses of the performance of candidates to provide feedback to the general public and key stakeholders in the education sector.

The 2023 Primary School Leaving Examination Performance Report is presented in two main chapters. The first chapter highlights examination statistics on candidature absenteeism and general performance, while the second analyses items in terms of content and cognitive domains, highlighting challenges and suggestions for improvement.

It is hoped that stakeholders at the policy and implementation levels and the general citizenry will find this report informative and useful in enhancing teaching and learning, continuous improvement, and learning accountability.

Dr. Michael M. Chilala
Executive Director
Examinations Council of Zambia

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1.0 Introduction

This report analyses candidates' performance in the 2023 Grades 7 Composite Examination. It presents statistical data at both national and regional levels by division classifications and grade distributions. Additionally, the report examines performance based on mean scores and gender, as well as across content areas and cognitive domains.

1.1 Overview of the 2023 Grade 7 Composite Examination

1.1.1 The Grade 7 Composite Examination consists of six learning areas and two intelligence tests. The six learning areas include English, Mathematics, Social Studies, Integrated Science, Creative and Technology Studies, and Zambian Languages. The two intelligence tests are Verbal Reasoning (Special Paper 1) and Non-verbal Reasoning (Special Paper 2).

1.1.2 The 2023 Composite Examination took place from Monday, October 30th to Thursday, November 2nd, 2023, with results announced on December 26th, 2023.

2.0 Candidature

A total of 502,670 candidates registered for the 2023 Grade 7 Composite Examination, out of which 502,484 were from Zambian schools and 186 were from St. Jeff College in Johannesburg, South Africa. Of the overall candidature, 48.17 percent were boys (242,149), and 51.83 percent were girls (260,521). The 2023 candidature increased by 1.77 percent from 493, 932 in 2022. By sex, boys' candidature increased by 1.70 percent from 2022 while that of girls' by 1.8 percent.

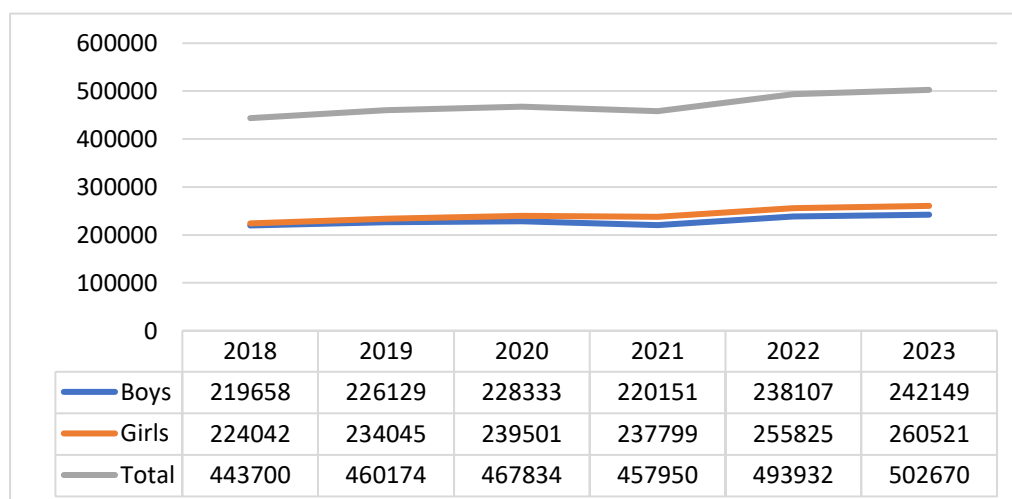


Figure 1: Grade 7 candidature for the years 2018 to 2023

2.1 Absenteeism

- 2.1.1 Out of the 502,670 candidates registered for the 2023 Examination, 48,274 (9.60%) were absent.
- 2.1.2 The percentage of candidates absent from the 2023 Examination increased slightly from 8.99 percent (44,398 candidates) in 2022 to 9.60 percent (48,274 candidates) in 2023.
- 2.1.3 By sex, 23,360 (9.65%) of the 242,149 registered boys and 24,914 (9.56%) of the 260,521 registered girls were absent from the examination.
- 2.1.4 North-Western and Western Provinces in 2023 had the highest absenteeism rates at 14.47 and 13.09 percent, respectively, up from 13.62 and 11.61 percent in 2022. The two provinces had the highest rates in 2022.
- 2.1.5 Lusaka recorded the lowest absenteeism rate at 7.13 percent. In 2022, Southern Province had the lowest rate at 6.29 percent.

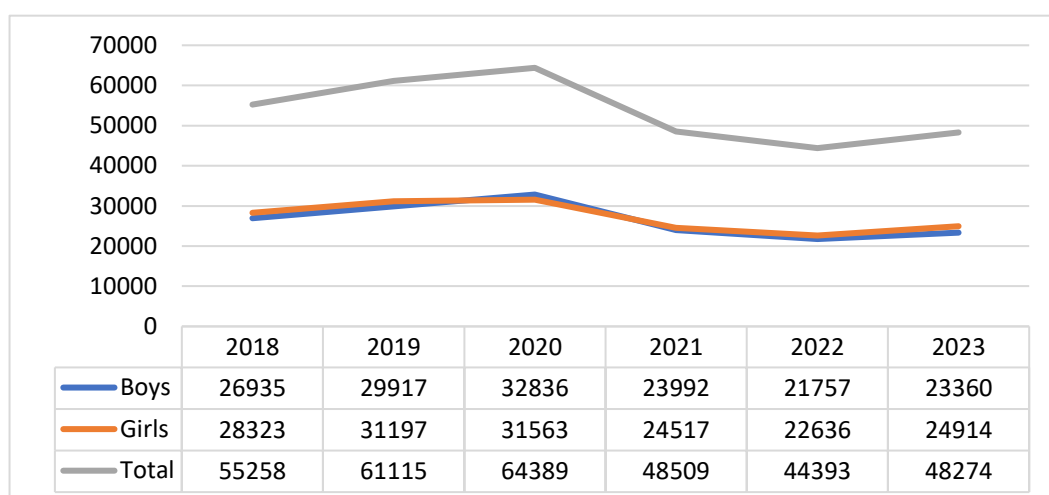


Figure 2: Number of Grade 7 candidates absent from the Examination (2018 to 2023)

3.0 General Performance

3.1 Certificate Awards

- 3.1.1 The Grade 7 Composite Examination scores are standardised to have a minimum score of 50 and a maximum of 150 for each learning area. The total score after standardisation for the best six learning areas is 900.
- 3.1.2 The certification awards are classified into four distinct divisions, namely, Division 1, Division 2, Division 3, and Division 4. The candidates in Division 4 did not meet the required competencies to proceed to secondary school. Candidates in Divisions 1 to 3 have demonstrated the necessary competencies to be eligible for selection into secondary school.

- 3.1.3 Certificate classification is based on any of the best four out of six curriculum-based subjects. To obtain Division 1, a candidate must obtain 460 standard points and above in the best four subjects, excluding the intelligence tests (Special Paper I and Special Paper II). To obtain divisions 2 and 3, candidates must score between 420 and 459 standard points and 372 and 419 standard points, respectively. For Division 4, the standard points are 371 and below (Refer to table 1 below).
- 3.1.4 A learner may score very high in the six learning areas, including the Intelligence tests, but get a lower certification division as the scores in the two intelligence tests are excluded from certification.
- 3.1.5 Table 1: 2023 Grade 7 Division Cut Scores

Division	Score
Division One (1)	460 and above
Division Two (2)	420 - 459
Division Three (3)	372 - 419
Division Four (4)	371 and below

- 3.1.6 The 2023 Grade 7 candidates's performance according to division classifications was as follows.
- 3.1.7 In 2023, 14.07 percent of the candidates obtained Division 1, 28.72 percent Division 2, 26.60 percent Division 3 and 30.60 percent Division 4.
- 3.1.8 More candidates in the 2023 Examination fell in Division Four (30.60%).
- 3.1.9 The lowest proportions in 2023 were recorded in the Division One category at 14.07 per cent.
- 3.1.10 The performance of boys and girls was generally comparable. (See table below).

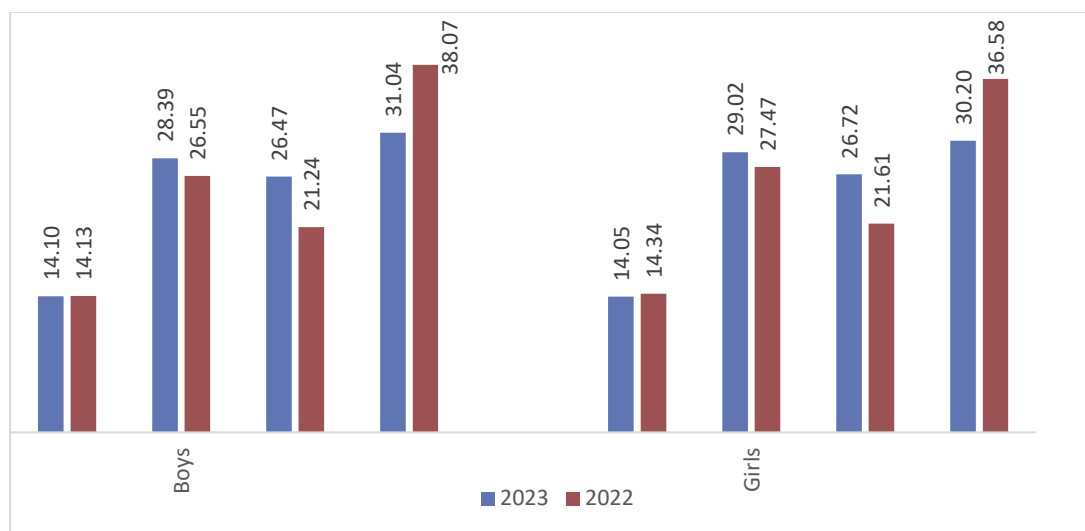


Figure 3: 2021 and 2023 Grade 7 Composite Examination Certificate Awards by Sex

Table 2: Grade 7 Performance According to Division and Gender for 2020, 2021 and 2023

Certificate	2023			2022			2021		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Division One	30844	33112	63956	30563	33437	64000	35107	39758	74865
(Percent)	14.1	14.05	14.07	14.13	14.34	14.24	17.9	18.64	18.28
Division Two	62111	68384	130495	57431	64032	121463	50877	56290	107167
(Percent)	28.39	29.02	28.72	26.55	27.47	27.03	25.94	26.39	26.17
Division Three	57924	62965	120889	45951	50380	96331	35175	38329	73504
(Percent)	26.47	26.72	26.6	21.24	21.61	21.43	17.93	17.97	17.95
Division Four	67910	71146	139056	82349	85287	167636	75000	78905	153905
(Percent)	31.04	30.2	30.6	38.07	36.58	37.3	38.23	37	37.59

3.2 Performance in Core Subjects by Mean Standard Scores

3.2.1 The subjects in this analysis include English Language, Social Studies, Mathematics, Integrated Science, Zambian Languages, and Creative and Technology Studies. The scores were standardised into a common measurement scale with a distribution ranging from 50 to 150 marks so that they could be compared.

3.2.2 The mean scores ranged from 99.77 percent in Integrated Science to 100.04 percent in Mathematics.

3.2.3 The mean scores for all subjects decreased in 2023, with the exception of Creative and Technology Studies.

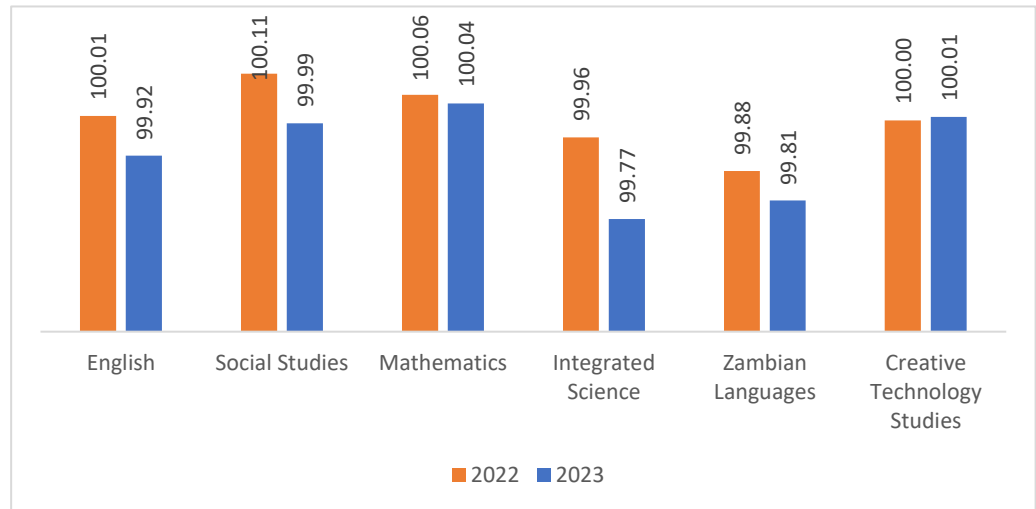


Figure 4: 2023 Core Subjects Mean Standard Scores

3.3 Performance by Mean Scores and Sex

3.3.1 The analysis revealed that boys marginally outperformed girls in Integrated Science (**0.14**), Creative Technology Studies (**0.10**), and Mathematics (**0.19**). On the other hand, girls performed better than boys in language-based subjects, namely English Language and Zambian Language, with mean differences of **1.03** and **0.67** marks, respectively.

3.3.2 In 2023, a broader margin was noted in the English Language, where the mean standard score for girls surpassed that of boys by **1.03** standard marks. Nevertheless, this difference was relatively smaller than the difference observed in 2022.

3.3.3 Overall, the data indicate minimal variation in girls' and boys' performance across all subjects (See Figure 5).

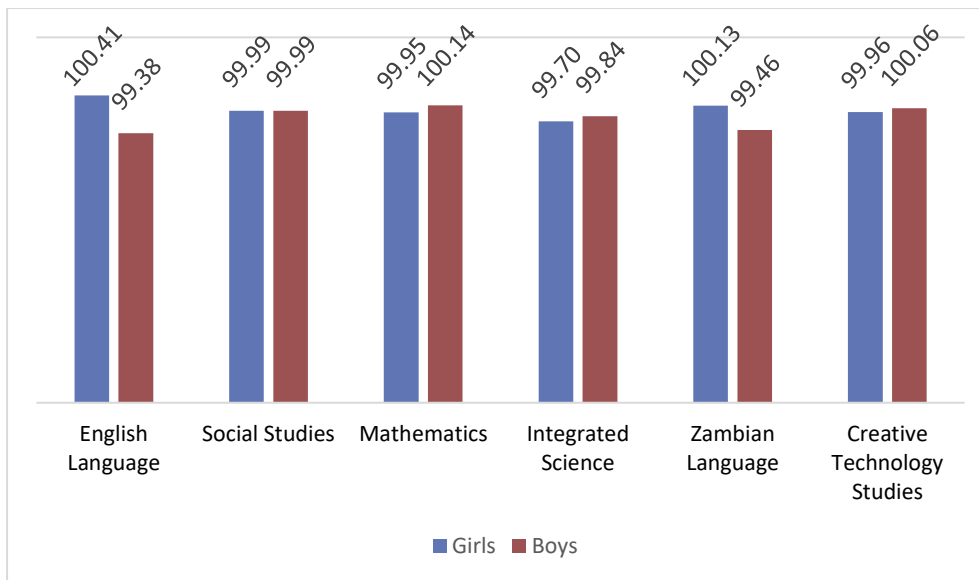


Figure 5: 2023 Mean Standard Scores by Gender

3.4 Performance by Sex in the Special Papers

3.4.1 The analysis indicated that boys performed better than girls in Special Papers 1 and 2 by mean marks of **0.24** and **3.23**, respectively.

3.4.2 In relation to both papers, the mean standard scores were almost identical, at 98.99 for Special Paper 1 and 98.86 for Special Paper 2, respectively (See Figure 6).

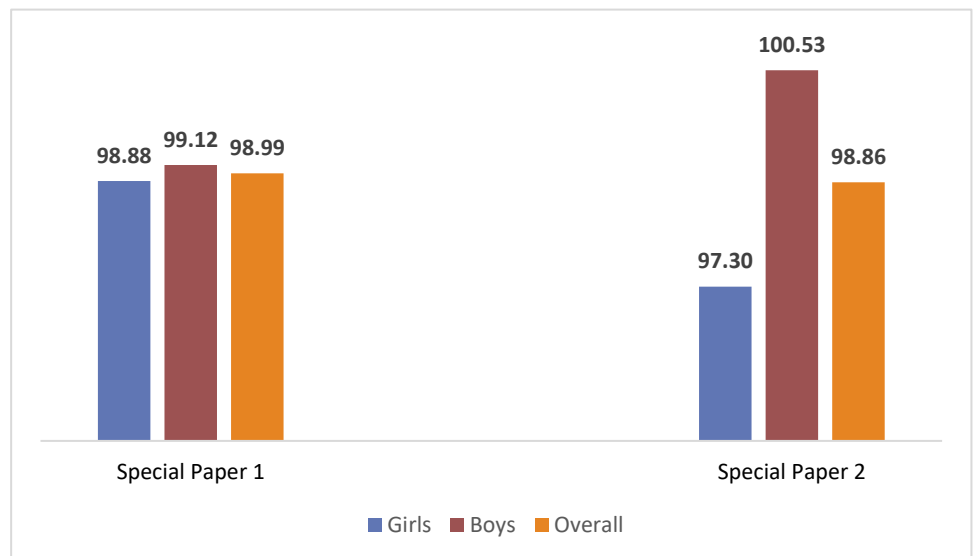


Figure 6: 2023 Mean Performances by Sex in Special Papers

3.5 Overall Performance According to Divisions at National Level

3.5.1 The 2023 Grade 7 performance according to division classifications as follows:

- 3.5.2 Division one saw a slight decrease of 0.17 percentage points from 14.24 percent in 2022 to 14.07 percent in 2023. In 2023, 30.6 percent of candidates fell into the division four (4) category, compared to 37.30 percent in 2022.
- 3.5.3 Division two proportions increased from 27.03 percent in 2022 to 28.72 percent in 2023.
- 3.5.4 Division three increased from 21.43 percent in 2022 to 26.6 percent in 2023.

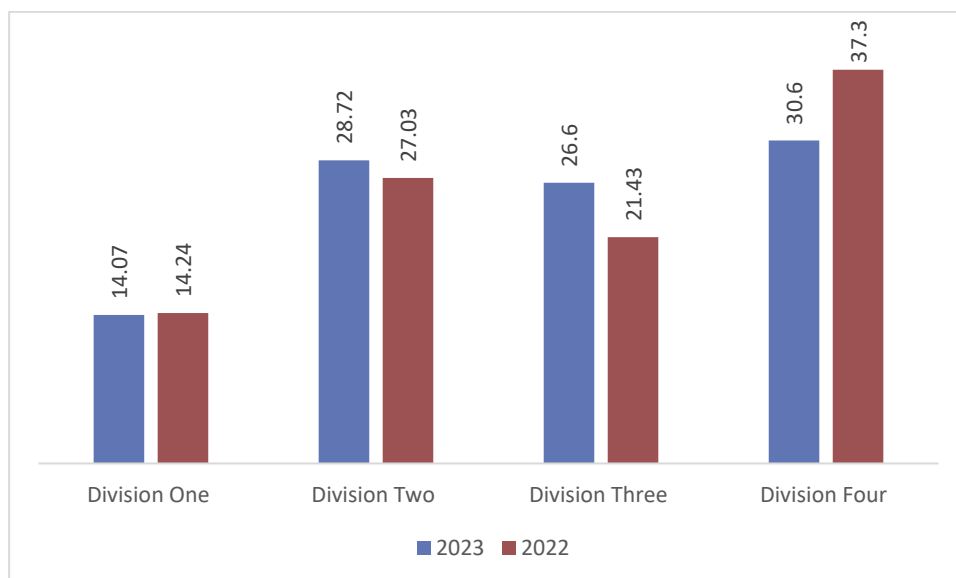


Figure 7: Division classification at National Level (2022 & 2023)

3.6 Overall Performance According to Divisions by Region

- 3.6.1 Overall, Copperbelt (22.29%) and Lusaka (21.55%) Provinces had the highest proportion of candidates obtaining division one.
- 3.6.2 Similar to 2022, Western Province recorded the lowest proportion of candidates obtaining division one (7.66%).
- 3.6.3 Copperbelt Province (32.59%) had the highest proportion of candidates that obtained division two, whilst Muchinga Province (31.61%) had the highest proportion for division three.
- 3.6.4 Similar to 2022, the highest proportion of candidates obtaining division four in 2023 was recorded in Central at 40.35 percent, followed by Southern at 39.65 percent.

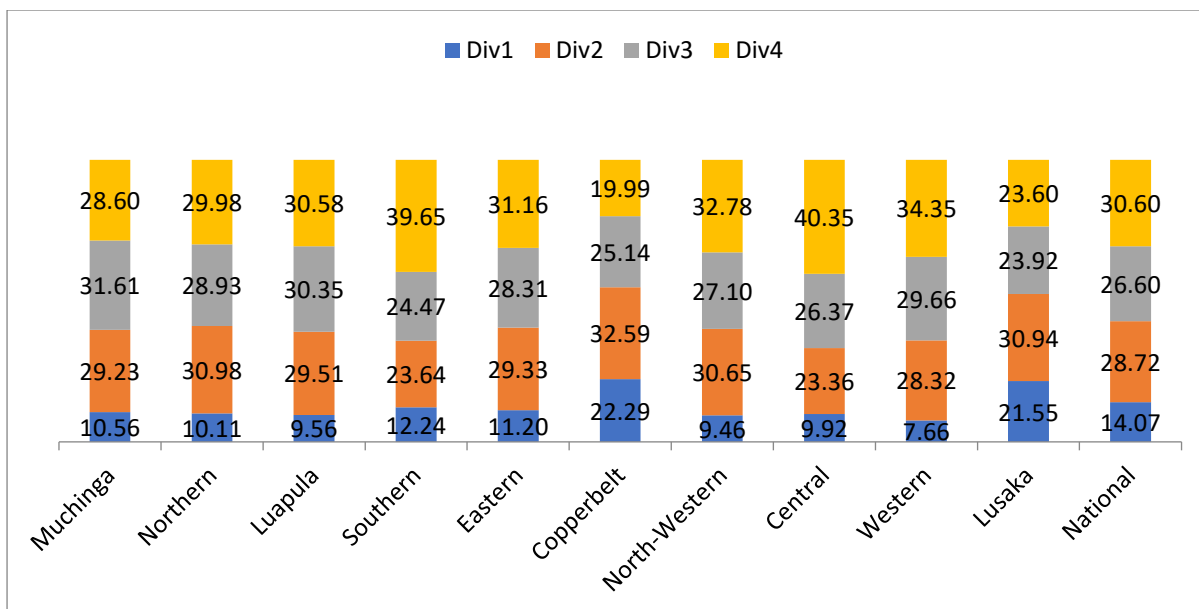


Figure 8: 2023 Proportion of Grade Distributions by Region

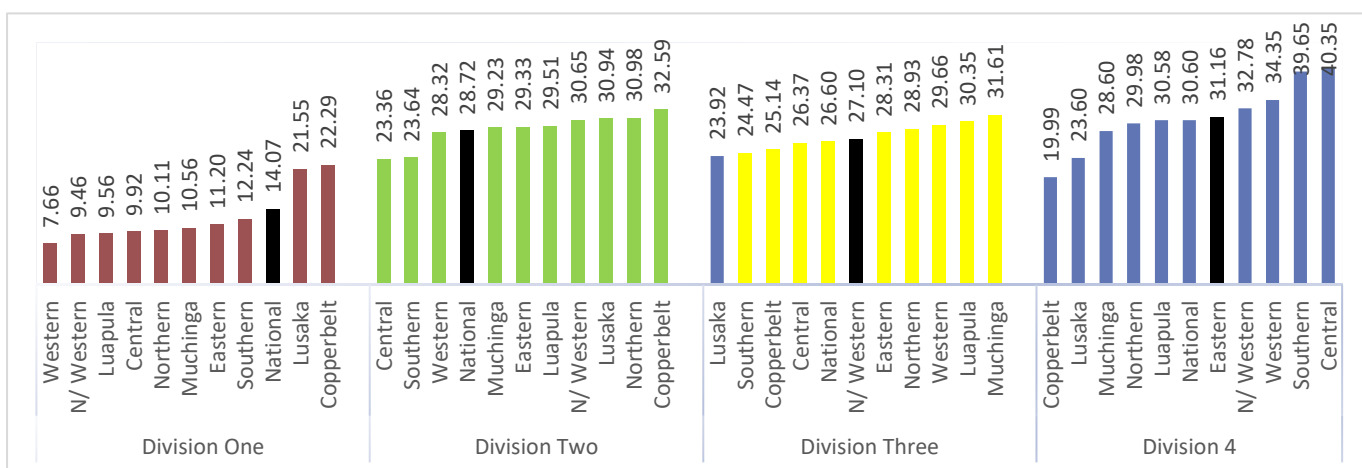


Figure 9: 2023 Proportion of Grade Distributions by Region

3.7 Grade Distribution by Subject at National Level

- 3.7.1 In the Division One category, Special Paper One had the highest mean score at **14.19** percent, compared to **12.95** percent in 2022. Social Studies came in second at **10.97** percent, while Special Paper Two had the lowest score at **10.19** percent.
- 3.7.2 In division two, CTS and Zambian languages had the highest percentage at **23.12** percent, followed by Mathematics at **22.87** percent.
- 3.7.3 Special paper two had the highest proportion of candidates obtaining division four at **40.58** percent. The proportion of candidates obtaining division four was higher than those obtaining divisions three, two, and one.

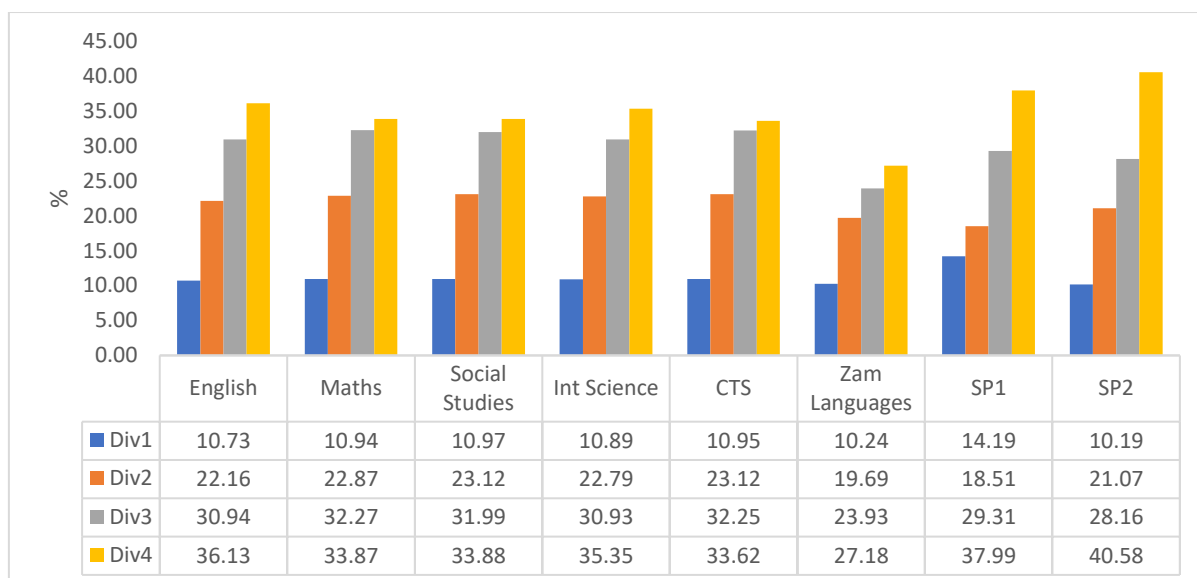


Figure 10: Proportion of Grade Distribution by Subject at National Level

3.8 Grade Distribution by Subject by Region

3.8.1 English Language

3.8.1.1 Similar to 2022, Lusaka Province recorded the highest proportion of candidates obtaining division one.

3.8.1.2 Luapula Province recorded the lowest proportion of candidates obtaining division one, at 6.02 percent. In 2022, Eastern was the lowest, at 5.62 percent.

3.8.1.3 Southern Province recorded the highest proportion of candidates obtaining division four at 46.03 percent. In 2022, Eastern was highest at 58.08 percent.

3.8.1.4 Similar to 2022, the highest proportion of candidates obtaining division two was recorded in Copperbelt Province at 28.69 percent.

3.8.1.5 Similar to 2022 and 2021, more candidates obtained division four in English Language across all regions.

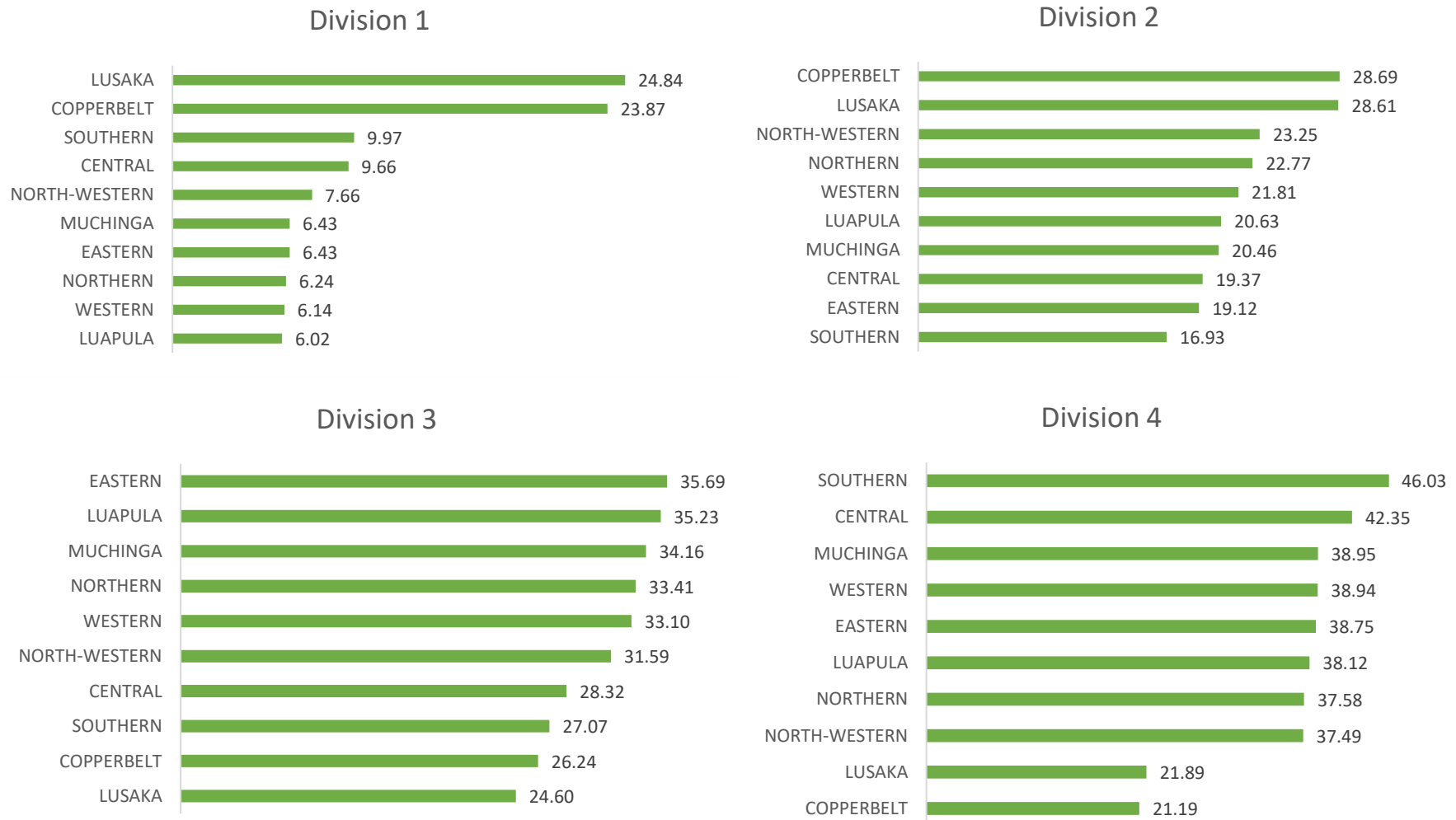


Figure 11: 2023 English Language Grade Distributions by Region

3.8.2 Mathematics

- 3.8.2.1 Copperbelt Province had the highest proportion of candidates obtaining division one, at 20.04 percent. In 2022, Lusaka had the highest proportion, at 19.76 percent.
- 3.8.2.2 Western Province had the lowest proportion of candidates obtaining division one in Mathematics at 6.03 percent.
- 3.8.2.3 Similar to 2022, Copperbelt Province had the highest proportion of candidates obtaining division two in Mathematics at 27.11 percent.
- 3.8.2.4 Southern Province had the highest proportion of candidates obtaining division four at 42.0 percent. In 2022 Central Province had the highest proportion of candidates at 54.63 percent.
- 3.8.2.5 More candidates obtained division four across all regions in Mathematics, just like in 2022.

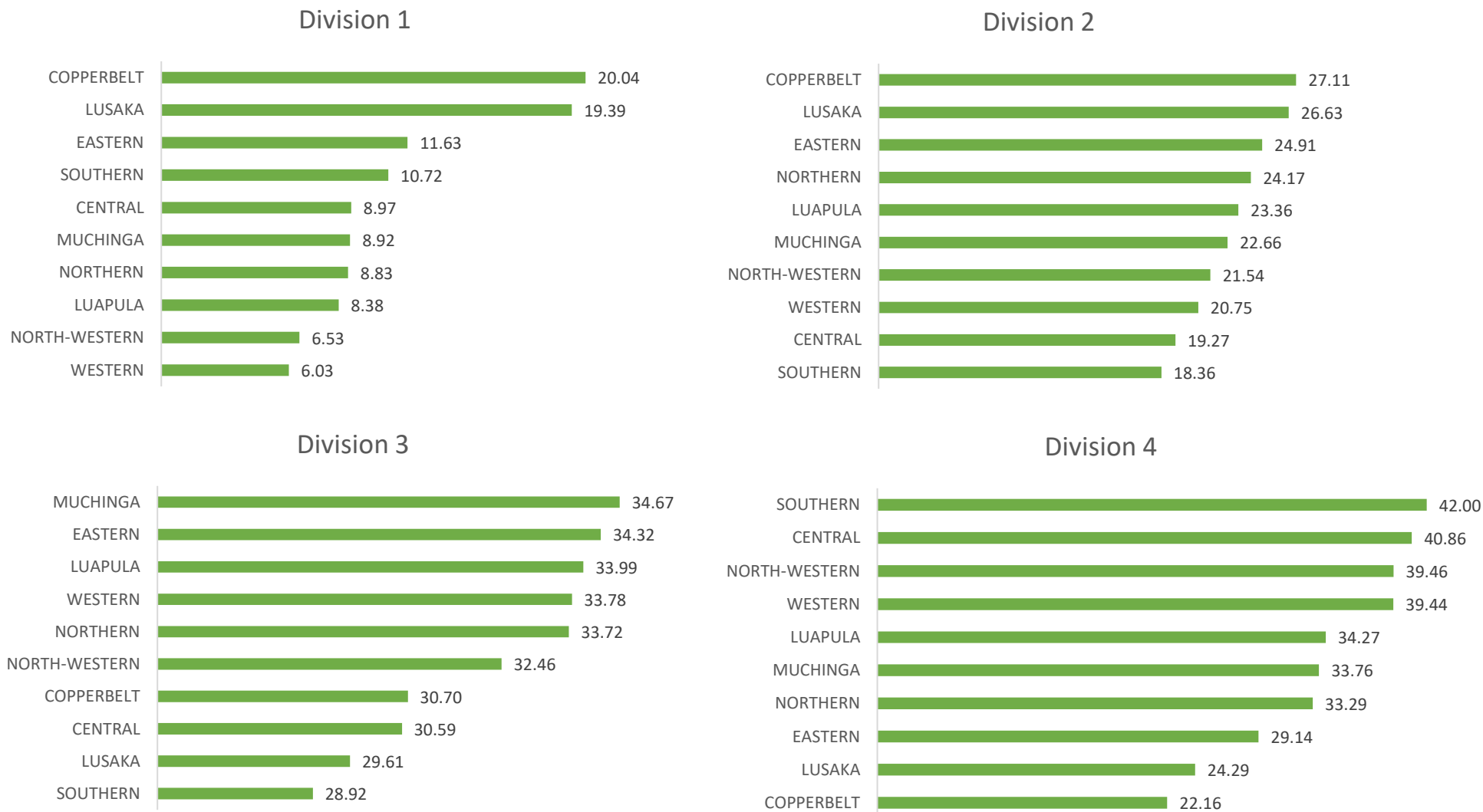


Figure 12: 2023 Mathematics Grade Distributions by Region

3.8.3 Social Studies

- 3.8.3.1 Lusaka Province had the highest proportion of candidates obtaining division one, at 19.12 percent, similar to 2022, when it was highest at 21.87 percent. Copperbelt Province was second in the proportion of candidates obtaining division one, at 18.21 percent, which was also highest in 2022, at 18.24 percent.
- 3.8.3.2 Similar to 2022, Eastern Province had the least proportion of candidates obtaining division one at 7.02.
- 3.8.3.3 Southern Province had the highest proportion of candidates obtaining division four at 41.63 percent, taking over from Eastern province at 55.91 percent in 2022.
- 3.8.3.4 More candidates obtained division four than divisions two and three across all regions in Social Studies.

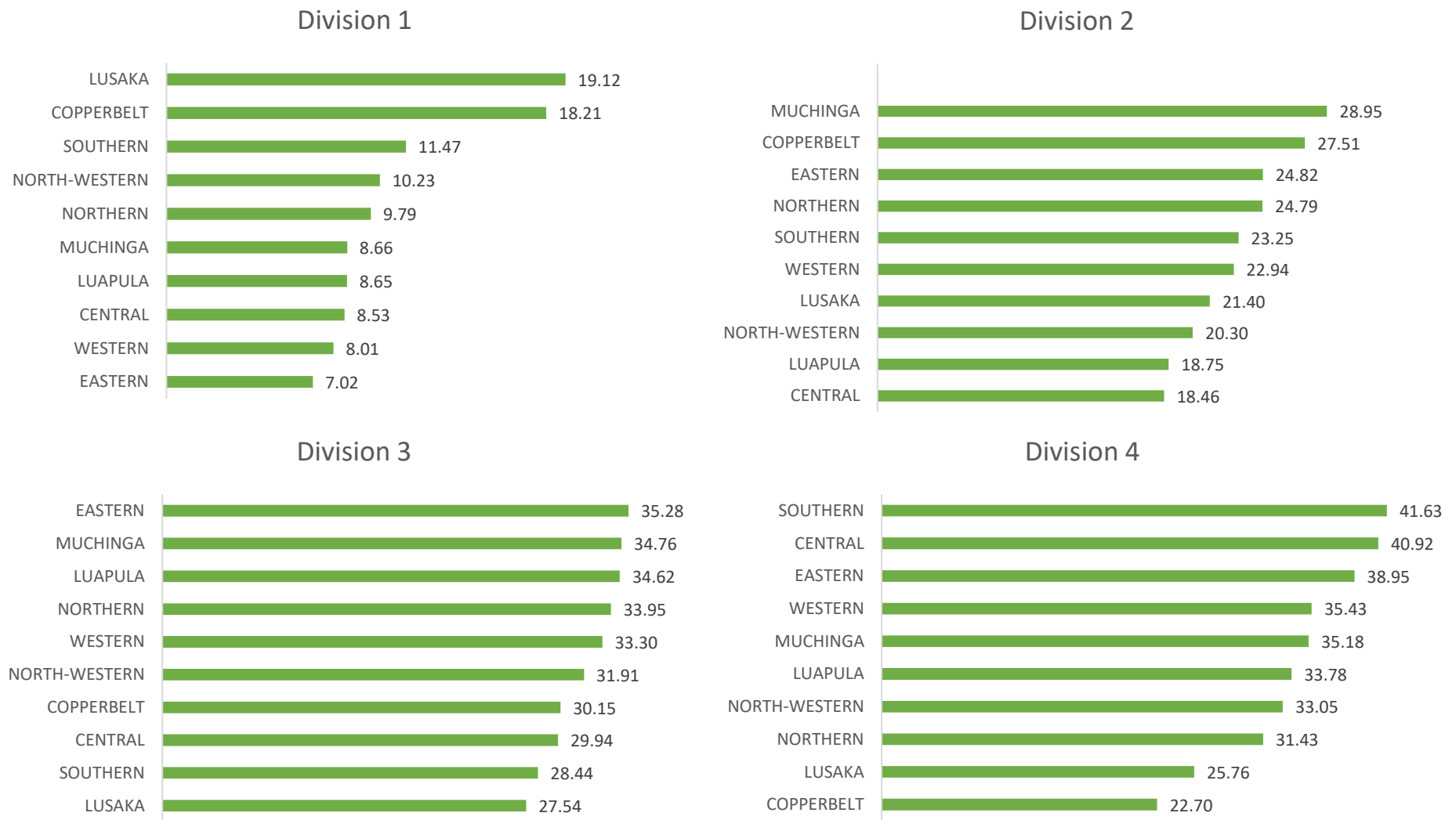


Figure 13: 2023 Social Studies Grade Distributions by Region

3.8.4 Integrated Science

3.8.4.1 Similar to 2022, Copperbelt had the highest proportion of candidates obtaining division one at 19.80. The second highest Province was Lusaka at 18. Percent.

3.8.4.2 Western Province had the lowest proportion of candidates obtaining division one at 6.51 percent, followed by North-Western Province at 8.43 percent.

3.8.4.3 Similar to 2022, Southern Province had the highest proportion of candidates obtaining division four at 44.70 percent.

3.8.4.4 Across all regions in Integrated Science, more candidates obtained division four than division three and two.

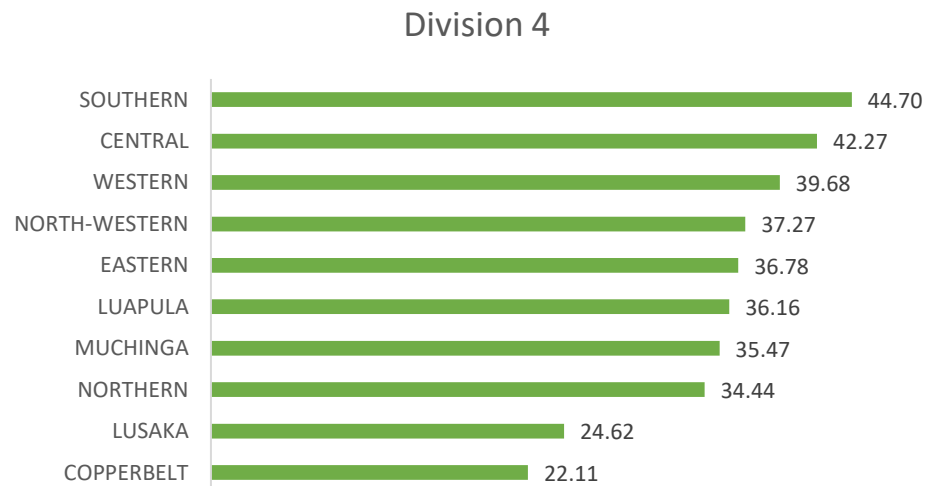
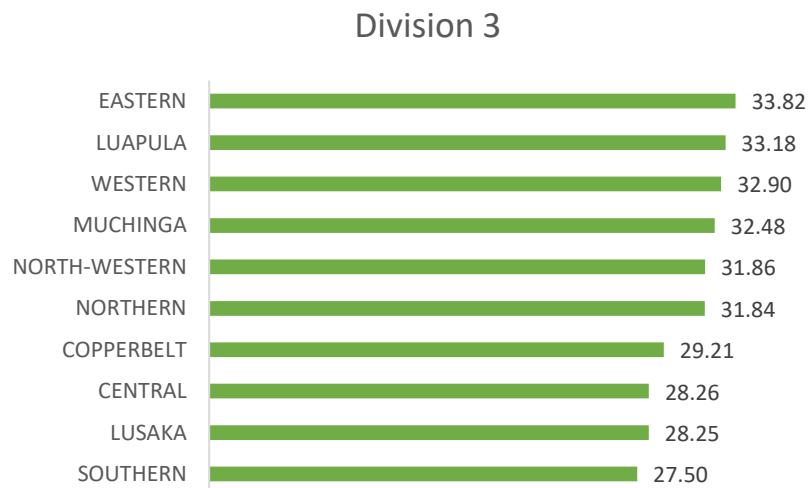
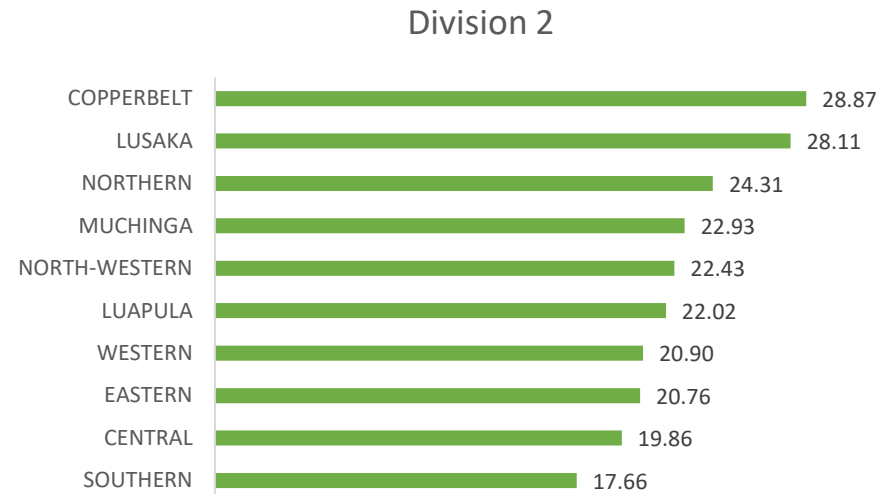
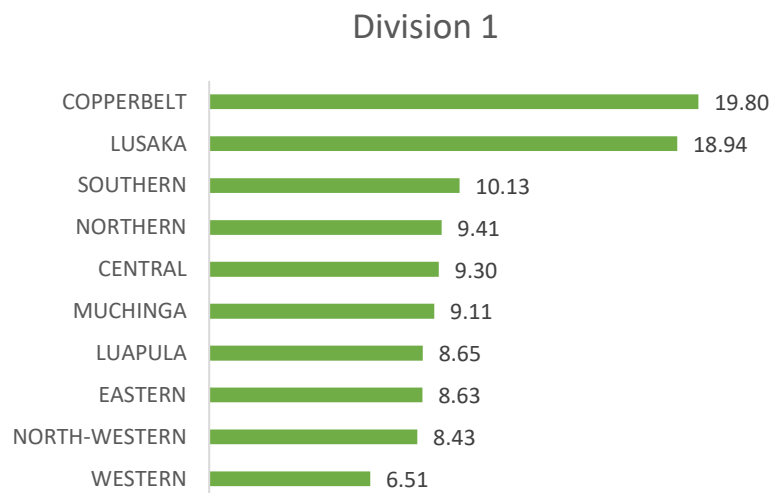


Figure 14: 2023 Integrated Science Grade Distributions by Region

3.8.5 Special Paper One

- 3.8.5.1 Lusaka Province had the highest proportion of candidates obtaining division one, at 25.39 percent, in 2020, 2021, and 2022.
- 3.8.5.2 Copperbelt (22.21%) replaced Southern Province as the best division two, followed by Lusaka (19.87%).
- 3.8.5.3 At division three, Eastern province had the highest proportion, 33.11 percent, the same position as in 2022, at 17.15 percent, while Southern had the highest proportion of candidates obtaining division 4, 42.69 percent.
- 3.8.5.4 More candidates obtained division four across all regions in Integrated Science

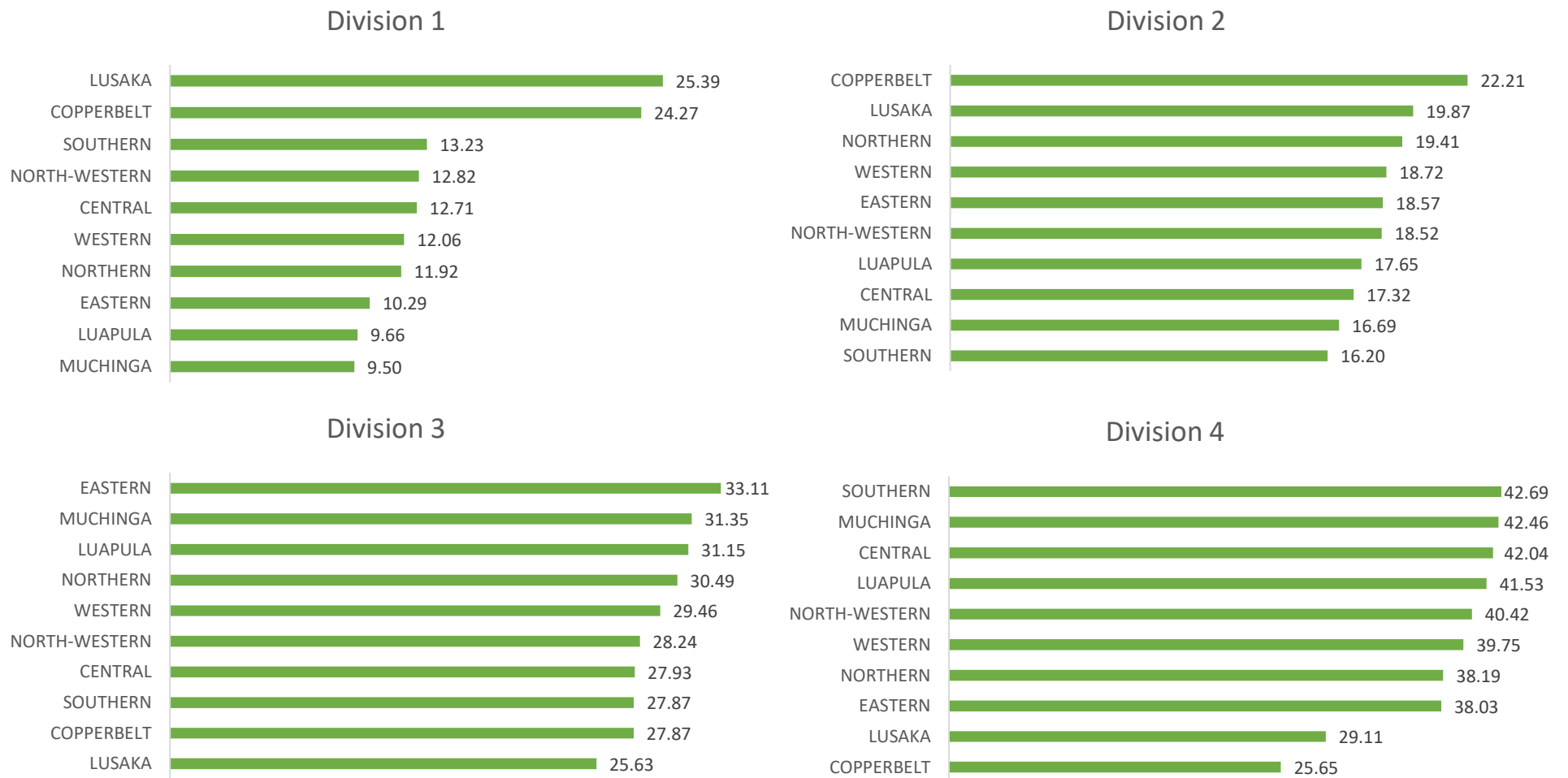


Figure 15: 2023 Special Paper One Grade Distributions by Region

3.8.6 Special Paper Two

- 3.8.6.1 Copperbelt Province had the highest proportion of candidates obtaining division one, at 16.98 percent, replacing Lusaka, which had the highest proportion in 2022, at 27.89 percent.
- 3.8.6.2 In the division two category, Lusaka was highest at 27.67 percent, followed by Copperbelt at 26.67 percent.
- 3.8.6.3 At division three, North-western had the highest proportion at 25.08 percent.
- 3.8.6.4 North-western Province had the highest proportion of candidates obtaining division four at 55.19 percent.

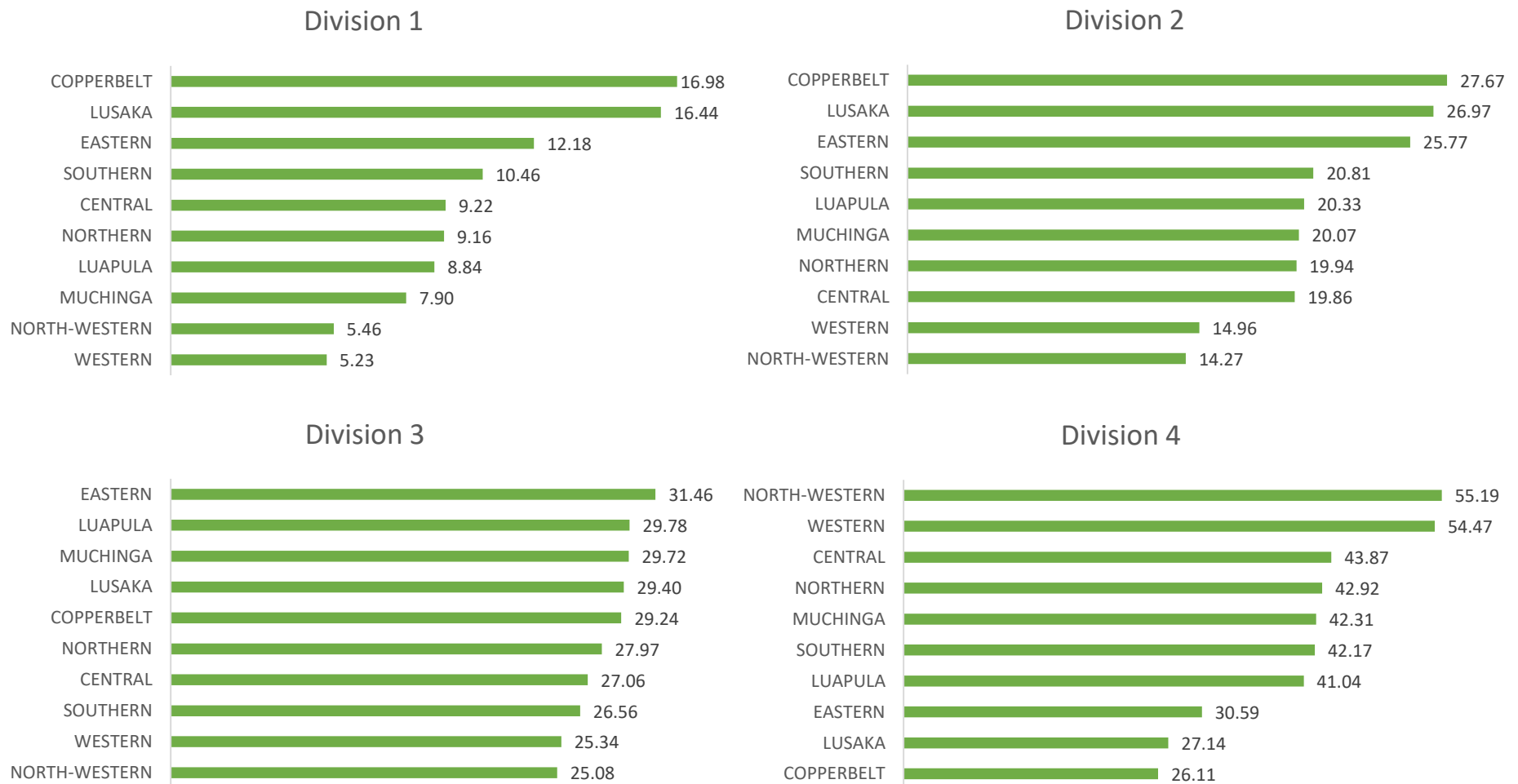


Figure 16: 2023 Special Paper Two Grade Distributions by Region

3.8.7 Creative Technology Studies

- 3.8.7.1 Copperbelt Province had the highest proportion of candidates obtaining division one, at 19.24 percent, taking over from Lusaka Province, which had the highest proportion, 25.99 percent, in 2022.
- 3.8.7.2 Western Province had the lowest proportion of candidates obtaining division one, at 7.49 percent, taking over from Eastern province, which had the lowest, at 6.21 percent, in 2022.
- 3.8.7.3 Copperbelt Province had the highest proportion of candidates that obtained division two at 29.76 percent, maintaining the same position as in 2022 at 28.89.
- 3.8.7.4 Southern Province had the highest proportion of candidates obtaining division 4, replacing Eastern Province, which had the highest proportion in 2022, at 58.15 percent.

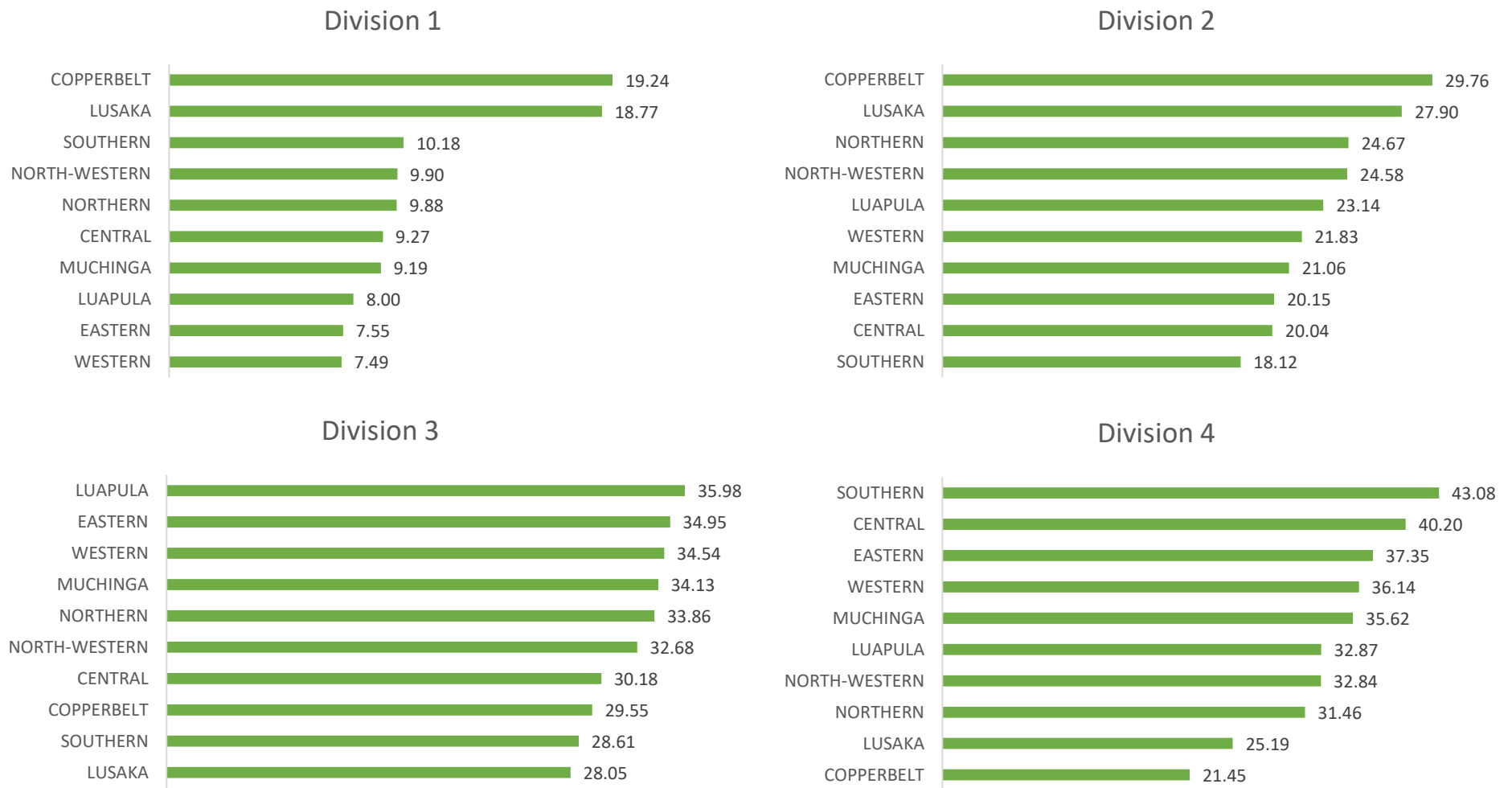


Figure: 17: 2023 Creative and Technology Studies Grade Distributions by Region

3.8.8 **Zambian Languages**

- 3.8.8.1 Eastern Province had the highest proportion of candidates obtaining division one in their respective Zambian Languages at 16.35 percent, followed by Southern at 14.05 percent.
- 3.8.8.2 Lusaka Province recorded the least proportion of division one at 5.02 percent.
- 3.8.8.3 Eastern Province also recorded the highest proportion in the division two category at 29.78 percent, followed by Southern at 28.53 percent.
- 3.8.8.4 Central Province had the highest proportion of candidates obtaining division four at 45.43 percent.

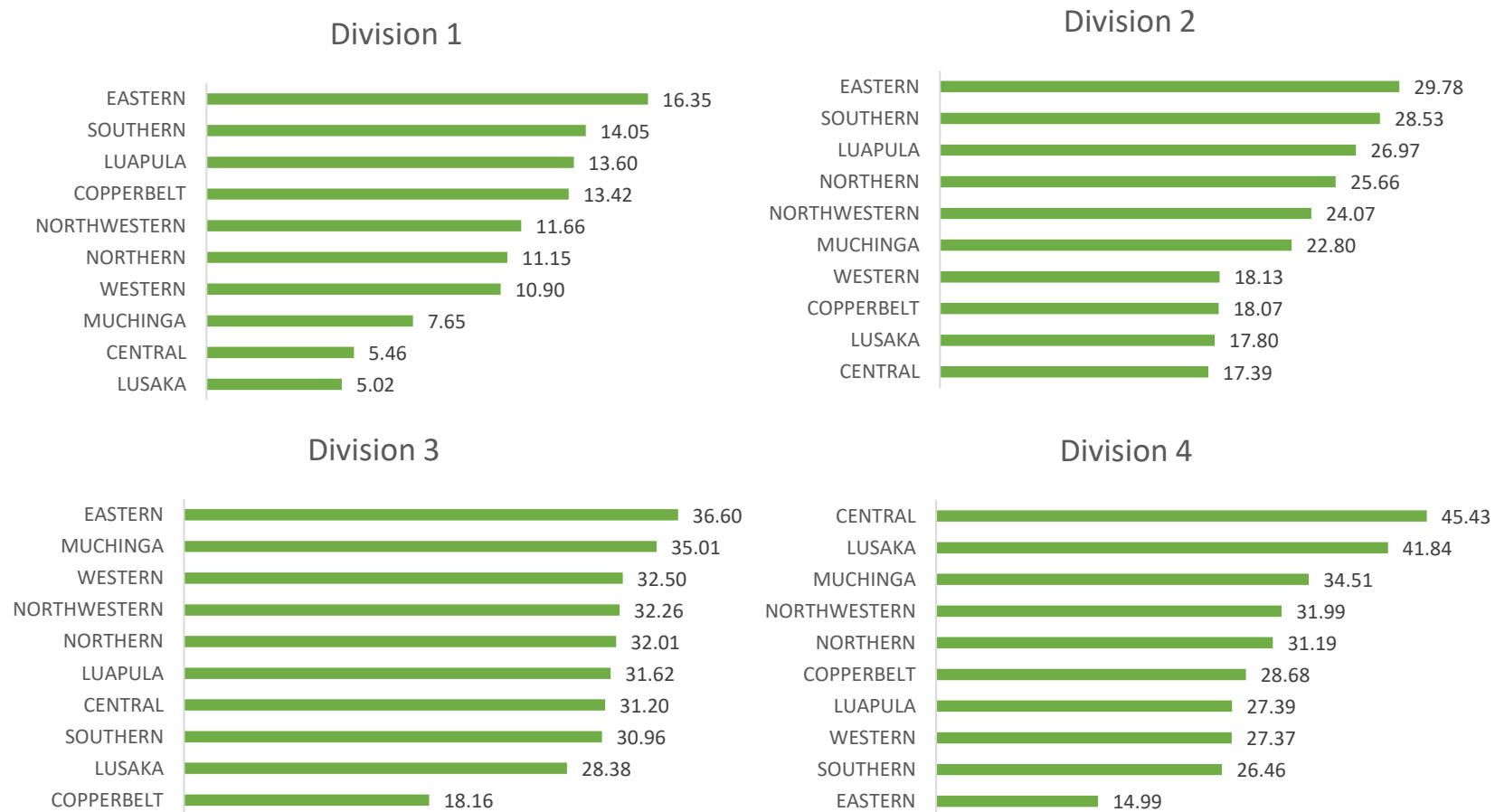


Figure 18: 2023 Zambian Languages Grade Distributions by Region

3.9 Provincial Performance by Gender

- 3.9.1 In the Southern, Copperbelt, and Western Provinces, the proportion of girls obtaining division one was higher than that of boys.
- 3.9.2 Copperbelt province recorded the highest proportion of girls outperforming boys in division one by 1.33 percentage points.
- 3.9.3 In the division two category, seven out of ten provinces recorded higher proportions of girls outperforming boys in terms of percentage points: Southern (3.53), Western (1.99), Lusaka (1.78), Copperbelt (1.13), North-Western (0.65), Central (0.55), and Muchinga (0.11).

Table 3: 2022 Grade 7 Overall Certificate Performances by Province and Gender

Certificates Classification								
Province	Boys				Girls			
	Div1	Div2	Div3	Div4	Div1	Div2	Div3	Div4
Muchinga	10.85	29.18	32.78	27.20	10.26	29.28	30.40	30.05
Northern	10.95	32.67	28.97	27.41	9.20	29.16	28.88	32.76
Luapula	10.78	31.47	30.54	27.21	8.32	27.52	30.15	34.01
Southern	11.65	21.84	24.20	42.31	12.81	25.38	24.73	37.09
Eastern	12.60	30.23	27.85	29.32	9.91	28.51	28.73	32.85
Copperbelt	21.58	31.99	25.31	21.12	22.91	33.12	24.98	18.99
N/ Western	9.62	30.31	27.18	32.89	9.32	30.97	27.03	32.68
Central	10.21	23.08	25.67	41.05	9.65	23.62	27.01	39.71
Western	7.23	27.28	29.19	36.30	8.05	29.27	30.09	32.60
Lusaka	21.65	29.98	23.46	24.91	21.46	31.76	24.32	22.47

4.0 Analysis of Performance by subject, content and cognitive Area

- 4.1 This section evaluates the performance of the 2023 Grade 7 Composite Examination candidates using item analysis. Using the difficulty index, the percentage of learners who answered a question correctly and overall learners' performance was analysed. The index ranges from 0 to 100. A higher difficulty index indicates how easy an item was to the learners and vice versa. Mean item

difficulty indices were used to identify specific content areas and cognitive levels that learners found easy and/or difficult in the 2023 Grade 7 Composite Examination. Distractor analysis was also used to identify misconceptions exhibited by the uninformed candidates (learners who could not distinguish between the correct and wrong responses).

4.2 English Language

4.2.1 The English Language questions were drawn from 13 content areas (topics) and five cognitive levels. The analysis by content area indicated that the topic ‘Adverb’ had the highest proportion of candidates answering the items correctly (51.23%), followed by ‘Pronouns’ (**50.68%**). The topic with the least proportion of candidates answering items correctly was ‘Adjectives’ (**34.15%**). In 2022, the topic ‘Sentence Meaning’ had the most correct answers, while ‘Collective Nouns’ had the least correct answers.

4.2.2 With regards to cognitive levels, the domain with the highest proportion of candidates answering items correctly was Analysis (**45.20%**). The second highest was in the Application domain (**44.96%**). The lowest proportion was recorded in Synthesis (**37.95%**). In 2022 application

domain was highest while synthesis was the least. (Refer to Figure 19).

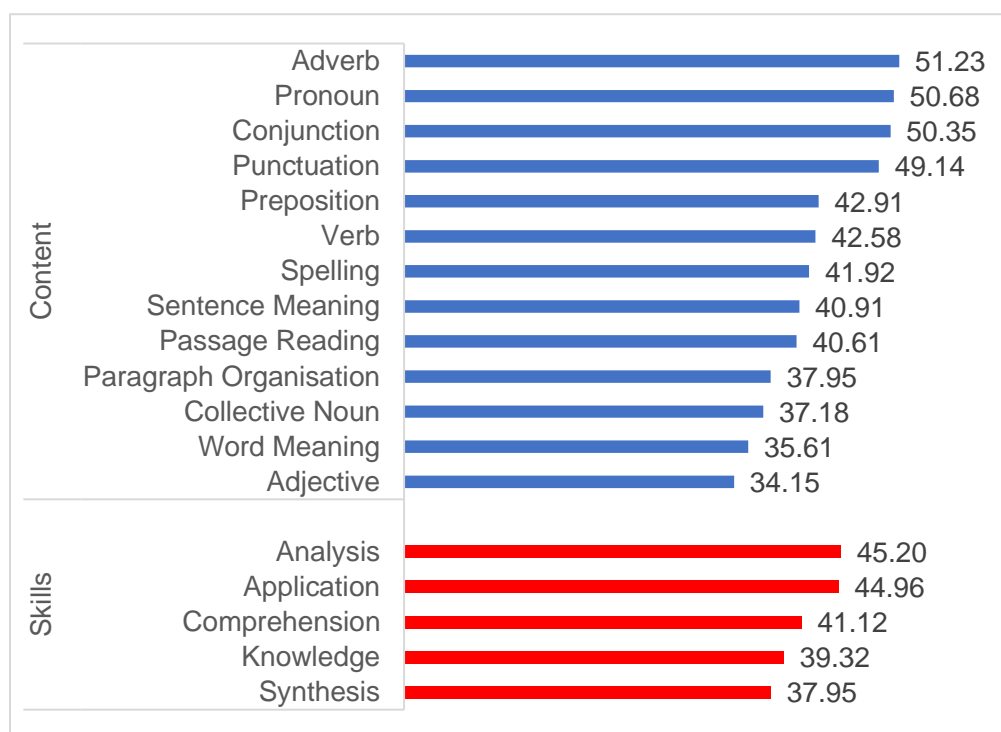


Figure 19: 2023 English Difficulty Index by Content Area/Cognitive Level

The following questions, respectively, were well and not well answered in the 2023 English examination:

Questions that were Well Answered	
Question 1 on conjunctions	Question 26 on punctuation
Question 6 on collective nouns	Question 56 on Passage Reading
Question 7 on Adverbs	Question 57 on Passage Reading
Question 21 on spelling	
Questions that were Poorly Answered	
Question 15 on verbs	Question 38 on sentence meaning
Question 17 on prepositions	Question 45 on paragraph organisation
Question 20 on adjectives	Question 48 on passage reading
Question 25 on spelling	Question 49 on passage reading
Question 36 on word meaning	Question 50 on passage reading

Misconceptions that could have led to Poor Performance in the above Questions

Question 15: Candidates opted for 'A' (drown) instead of 'B' (drowned). The misconception may have arisen because some irregular verbs indicate the past (perfect) with the letter n. e.g. see seen, sew sewn, draw drawn

Question 17: Despite the entity the required preposition relates to being one (head boy), a large number of candidates went for Option 'D' (between), which relates to two entities instead of 'B' (beside).

Question 20: Most candidates failed to recognise adjectives derived by adding the suffix 'ed' to verbs, nouns or other adjectives, e.g., feared, bent, green-coloured.

Question 25: The confusion was on which letter should be doubled between r and l or both in word quarrel.

Question 36: Most candidates chose option 'A', confusing the verb invent with renovate.

Question 38: The fact that over 50 percent of the candidates chose options 'A' and 'B', which stated that Chiyembekezo was either starving and stealing or not starving and stealing, respectively, suggests that the structure 'would rather + verb + than + verb' is mistakenly taken as a comparison structure and not as a preference one.

Question 45: Most candidates failed to select the topical sentence from the provided sentences to organise the paragraph in this question. The topic(al) sentence was key to organising the paragraph correctly.

Question 48: This question involved high-order cognitive skills because the information for the answer was not explicitly in the passage,

Question 49: This passage reading question was difficult for most candidates because it was based on vocabulary. The meaning of the word 'quivering', on which the question was anchored, was unfamiliar.

Question 50: The confusion in this question arose from the thin line between the uses/meanings of three options: pots, plates, and containers. The candidates found it difficult to distinguish their uses.

Suggestions for Improvement

- i. All structures in the syllabus need to be taught and practised adequately.
- ii. Similar structures, such as ‘Comparison and Preference’ and ‘Reason and Purpose,’ must be clearly distinguished.
- iii. Paragraph Organisation needs to be explained and taught regularly,
- iv. Teaching of Reading Passages (Comprehension) needs to involve the relating issues raised in the passage to current and past societal issues (general knowledge)
- v. Discussion on passages and not just reading and testing need to be encouraged.
- vi. Coverage of all the syllabus content should be the goal of every teacher
- vii. Emphasis on the need for CPDs.

4.3 Mathematics

The mathematics assessments at the Primary Level aim to measure learner achievement against the set competencies and the acquisition of reasoning and problem-solving skills as outlined in the syllabus. The Mathematics Examination focuses on Knowledge, Comprehension, Application, and Problem-solving skills. Candidates are expected to apply mathematical concepts and skills to find the correct answers to a given problem. The paper comprises computational, graphical, and word problem question types.

4.3.1 Mathematics questions were drawn from 23 content areas (topics) across three cognitive levels, as shown in Figure 20. The analysis by content area indicated that the topic ‘Addition and Subtraction’ had the highest proportion of candidates answering the items correctly (71.54%), followed by ‘Factors and Multiples’ (**71.46 %**). The topic with the lowest proportion of candidates answering items correctly was ‘Angles’ (**30.41%**). In 2022, the topic ‘Number Patterns’ had the most correct answers, while ‘Measures ’had the least correct answers.

4.3.2 Regarding cognitive levels, the domain with the highest proportion of candidates answering items correctly was Knowledge (**55.09%**). The second highest was in the Comprehension domain (**54.68%**). The

lowest proportion was recorded in Application (**50.35%**). In 2022, the Comprehension domain was highest while Application was lowest. Refer to Figure 20).

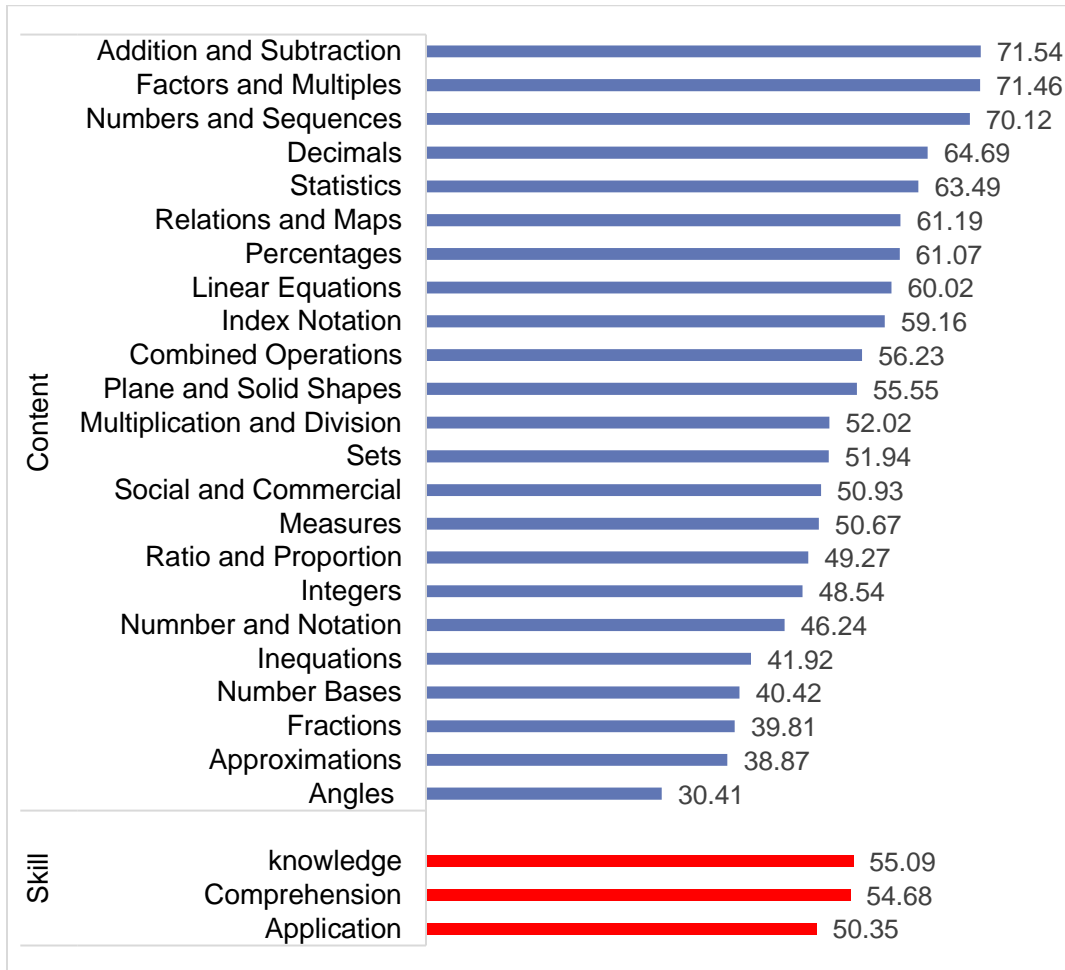


Figure 20: 2023 Mathematics Difficulty Index by Content Area/Cognitive Level

Question 46	Number and notation	Question 55	Fractions
Question 51	Fractions	Question 56	Angles
Question 52	Number Bases	Question 59	Social and Commercial Arithmetic
Question 53	Approximations	Question 60	Percentages

following questions were not well answered in the 2023 Mathematics examination:

Errors and misconceptions that could have led to poor performance in the above questions

- i. Number and Notation - Converting from Roman numerals to Arabic numerals.
Some candidates could not get the item correct because they did not understand the arrangement of the numerals. The arrangement determines when to add or subtract, depending on whether the smaller Roman numeral is to the left or right of the bigger Roman numeral.
- ii. Fractions – Division of a proper fraction by a mixed number.
Some candidates did not understand the concept of dividing a fraction by another fraction. Some multiplied the first fraction by the improper fraction instead of its reciprocal. In contrast, a larger proportion multiplied the improper fraction's numerators by the proper fraction's numerators and divided the answer by 5.
- iii. Number bases -Subtraction in base eight
Most candidates who did not get the correct answer did not reduce the value of the number to the left by 1 after getting a 1 from the number to the left, representing eight in base eight.
- iv. Approximation – Rounding off a whole number to the nearest ten.
A larger proportion of the candidates did not realise that 65 is nearer to 70; therefore, they should have added a 1 to the number 6 in the tens position. Other candidates had a challenge with the place value of the tens position. Instead of adding a 1 to the tens position, a 1 was added to the number in the hundreds position.
- v. Index Notation – Finding the value of a number written in Index notation.

A larger proportion could not get the answer right because of multiplying the index (power) with the base. They should have multiplied the base 4 by itself three times because the power was 3.

vi. Fractions – Addition of proper fractions.

A larger proportion added the numerators and denominators, such as ordinary addition. They lacked knowledge of equivalent fractions of expressing the fractions using the same denominator before they could be added.

vii. Angles – Identification of different types of angles.

A larger proportion of the candidates did not understand the word problem. They went for the option that had a right angle because of seeing 90° in the item.

viii. Social and Commercial Arithmetic – Simple interest

Understanding of simple interest was lacking in most of the candidates. Instead of using the formula for finding interest, most added the numbers in the question.

ix. Percentages – application of converting common fractions to percentages.

Interpreting word problems was a challenge for the candidates in this item. A larger proportion of the candidates added the number given in the question because they lacked an understanding of percentages.

Suggestions for Improvement

- i. Teachers should give sufficient practice to the learners on how to convert different Roman numerals with various arrangements of the different numerals on the left and right of a larger numeral.
- ii. Division of a fraction by another fraction requires the use of teaching aids and application to real life for candidates to have a conceptual understanding of the topic. Teachers should avoid only giving rules of what candidates should do to find the answer. Candidates should be involved in practical activities involving the division of a fraction by another fraction.

- iii. Subtraction of numbers in base eight requires a conceptual understanding of what is meant when a 1 is got from the number to the left when subtracting. Involve learners in the activities and give them more practice.
- iv. Approximating a whole number to the nearest ten, hundred, and so on should be done from a practical point of view. Teachers should involve learners in determining the multiple of ten or hundred, and so on that a given number is nearer to before establishing certain principles or rules of adding a number to the round-off figure and inserting zeros in the positions of the digits that come after the round-off figure.
- v. Teachers should differentiate the topic index notation from ordinary multiplication and ensure the learners' conceptual understanding of the meaning of the power (index).
- vi. Teachers should teach the topic of addition and subtraction of proper fractions from a practical point of view. Learners should get involved in their learning through practical activities to understand that fractions that have the same denominators are the only ones where numerators and denominators can be added to find the answer.
- vii. Teachers should teach the topic angles from a practical point of view so that learners can understand and differentiate between the different types of angles through drawing and measuring.
- viii. Teachers should teach the topic of finding Simple Interest from a practical point of view of borrowing money from people or business houses and paying back with interest before teaching about the formula of calculating interest. The teacher should explain the terms rate, time, and principal from a real-life and practical point of view.
- ix. Teachers should ensure that learners understand percentages from a real-life and practical point of view. Learners should be given sufficient practice in expressing fractions as percentages and applying the concept to real life. Teaching Mathematics from a practical point of view will foster a conceptual understanding of the topics.

4.4 Integrated Science

4.4.1 In Integrated Science, questions were drawn from 5 content areas (topics) and across five cognitive levels, as shown in Figure 21. The analysis by content area indicated that the topic ‘Health’ had the highest proportion of candidates answering the items correctly (51.24%), followed by ‘Materials and Energy’ (50.33 %). The topic with the least proportion of candidates answering items correctly was ‘The Environment’ (**41.21%**). In 2022, the topic ‘Plants and Animals’ had the most correct answers, while the topic ‘Environment’ had the least correct answers, similar to 2023.

4.4.2 The cognitive level domain with the highest proportion of candidates answering items correctly was Knowledge (**51.64%**). The second highest was the Analysis domain (**47.89%**). The least proportion was recorded in Evaluation (**35.94%**). Similarly, in 2022, the Knowledge domain was highest while evaluation was the least.

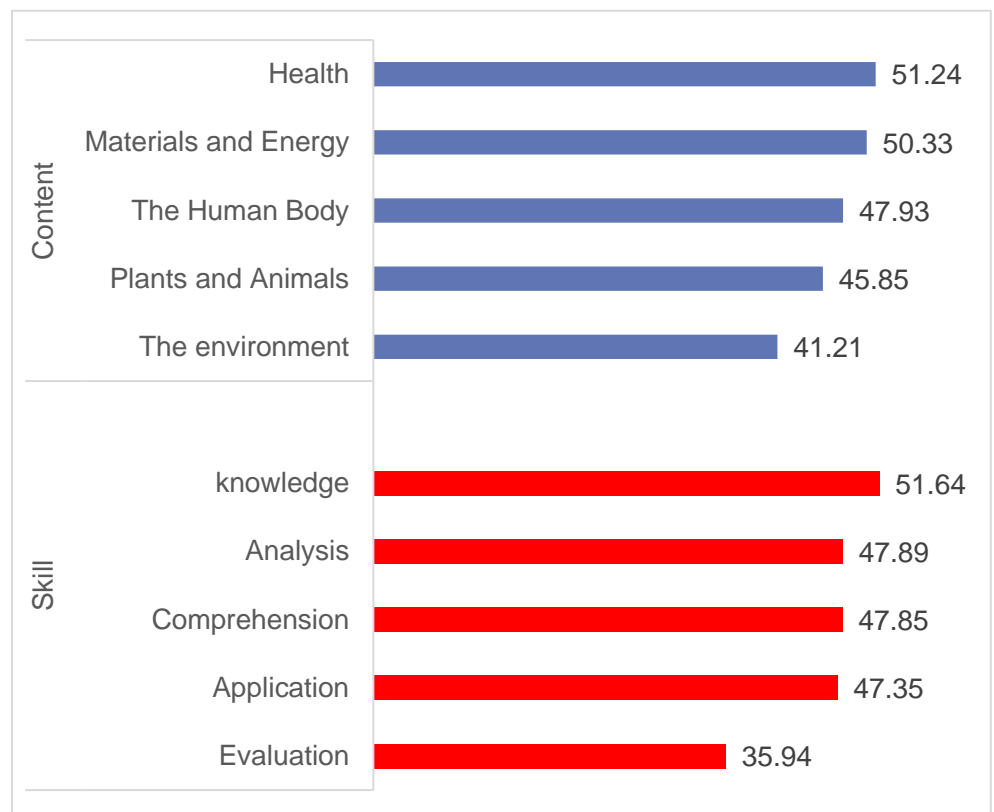


Figure 21:2023 Integrated Science Difficulty Index by Content Area/Cognitive Level

The following questions were answered well and not well in the 2023 Integrated Science examination.

Questions were well answered.

- i. **Question 1:** The question was from Health and required candidates to identify diseases that affect the skin. 69.71 percent of the candidates got it correct.
- ii. **Question 3:** The question was from Materials and Energy and required candidates to identify metals given several substances. 67.74 percent of the candidates got the question correct.
- iii. **Question 5:** The question was from material and energy and required candidates to identify a method of communication in which sound is used. 68.18 percent of the candidates got it correct.
- iv. **Question 6:** The question was from Health and required candidates to identify a component of air given various substances. 66.55 percent of the candidates got it correct.
- v. **Question 11:** The question was from the Human Body and required candidates to state the function of the heart. 69.89 percent of the candidates got it correct.

Questions not well answered

- i. One question was not well answered in the 2023 Integrated Science examination: question 47 from the topic 'The Environment'. Only 28.02 percent of the candidates got it correct.

Challenges and Misconceptions

1. The question required candidates to identify the component of the water treatment system that removes suspended substances from the water. There was a Lack of understanding of concepts; for instance, most of the candidates gave boiling as a method of removing suspended matter from water during water treatment.

The misconception identified was that boiling kills germs so that the germs will be ‘removed’ from the water.

11. Most candidates went for the option of boiling (40.46 percent). This could be attributed to misinterpretation of the question and lack of content knowledge. The candidates misinterpreted the killing of germs for their removal from the water. Enrolment

Recommendations

- i. Candidates should be exposed to more practical work and, in some cases, fieldwork to consolidate the theoretical concepts.
- ii. Candidates must be exposed to more assessments to practice and improve their skills.
- iii. Teaching integrated science should include using teaching and learning aids to help candidates visualise what they hear.
- iv. The strategies employed during content delivery on the topic ‘The Environment’ must be re-looked to become more meaningful to the candidates.
- v. The teaching should clearly explain scientific concepts, procedures, phenomena, and terms to eliminate misconceptions among the candidates.

4.5 Social Studies

- 4.5.1 The Social Studies questions were drawn from 7 content areas (topics) and four cognitive levels, as shown in Figure 22. The analysis by content area indicated that the topic ‘Governance’ had the highest proportion of candidates answering the items correctly (51.15%), followed by ‘Transport and Communication’ (**47.78%**). The topic with the least proportion of candidates answering items correctly was ‘The Environment’ (**43.33%**). In 2022, ‘Learning about Money’ had the most correct answers, while ‘World Challenges’ had the lowest proportion.
- 4.5.2 The cognitive level domain with the highest proportion of candidates answering items correctly was Knowledge (**48.14%**). The second highest was in the Analysis domain (**47.16%**). The least proportion was recorded

in Analysis (**37.09%**). In 2022, the Comprehension domain was highest while Analysis was the least.

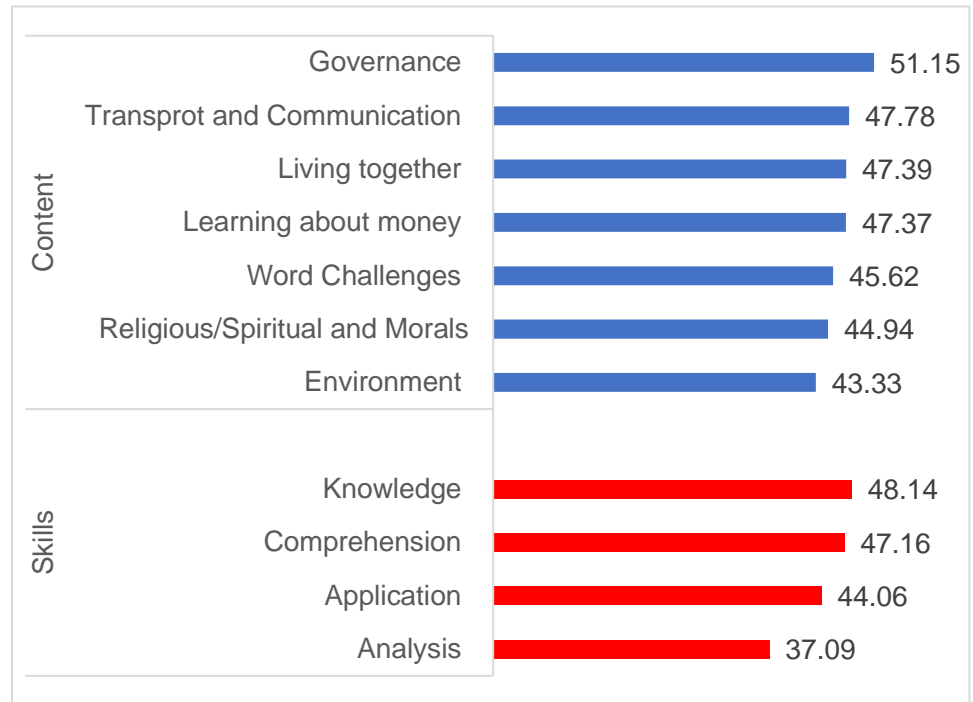


Figure 22: 2023 Social Studies Difficulty Index by Content Area/Cognitive Level

The following questions were answered well and not well in the 2023 Social Studies examination.

Questions well answered

- i. **Question 1:** The lesson learnt from the Story of a Good Samaritan.
- ii. **Question 3:** Environment-Diseases caused by water pollution.
- iii. **Question 4:** Transport and communication- fastest mode of communication,
- iv. **Question 5:** Learning about money- identifying the value of money.

Questions not well answered

- i. **Question 2:** Identifying the most important human rights
- ii. **Question 32:** Factors that cause pollution.
- iii. **Question 33:** Transport and Communication- types of transport.

- iv. **Question 55:** describing the world's famous Regions.
- v. **Question 60:** Name a desert on the map.

Errors and misconceptions that could have led to poor performance in the above questions.

- i. Failure to rank the human rights according to their importance.
- ii. Failing to Identify the causes of pollution
- iii. Little knowledge on the subject matter and inability to understand the concepts.
- iv. Little knowledge on the location of deserts on the map.

Suggestions for Improvement

- i. Teachers should attempt to cover the syllabus in full.
- ii. Teachers should teach according to the demand of specific outcomes on each topic and subtopics to help learners understand the concepts very well.
- iii. Teachers should link the lesson to a real-life situation by exposing the learners to scenarios that exist in their societies.
- iv. Teachers should give feedback from SBA to detect challenges at an early stage and mitigate them.
- v. Teachers should use concrete examples to explain concepts.
- vi. Subject learners to a lot of remedial work to reinforce learning.

4.6 Creative and Technology Studies

4.6.1 The Creative and Technology Studies questions were drawn from 12 content areas (topics) across six cognitive levels, as shown in Figure 11. The analysis by content area indicated that the topic 'Energy' had the highest proportion of candidates answering the items correctly (64.34%), followed by 'Applied Music' (**59.13%**). The topic with the least proportion of candidates answering items correctly was 'Human Development' (**33.29%**). Followed by 'Tools and Materials' (37.91%)

4.6.2 With regard to cognitive levels, the domain with the highest proportion of candidates answering items correctly was Evaluation (**52.85%**). The

second highest was in the Knowledge domain (51.22%). The least proportion was recorded in Synthesis (42.81%). Refer to Figure 23).

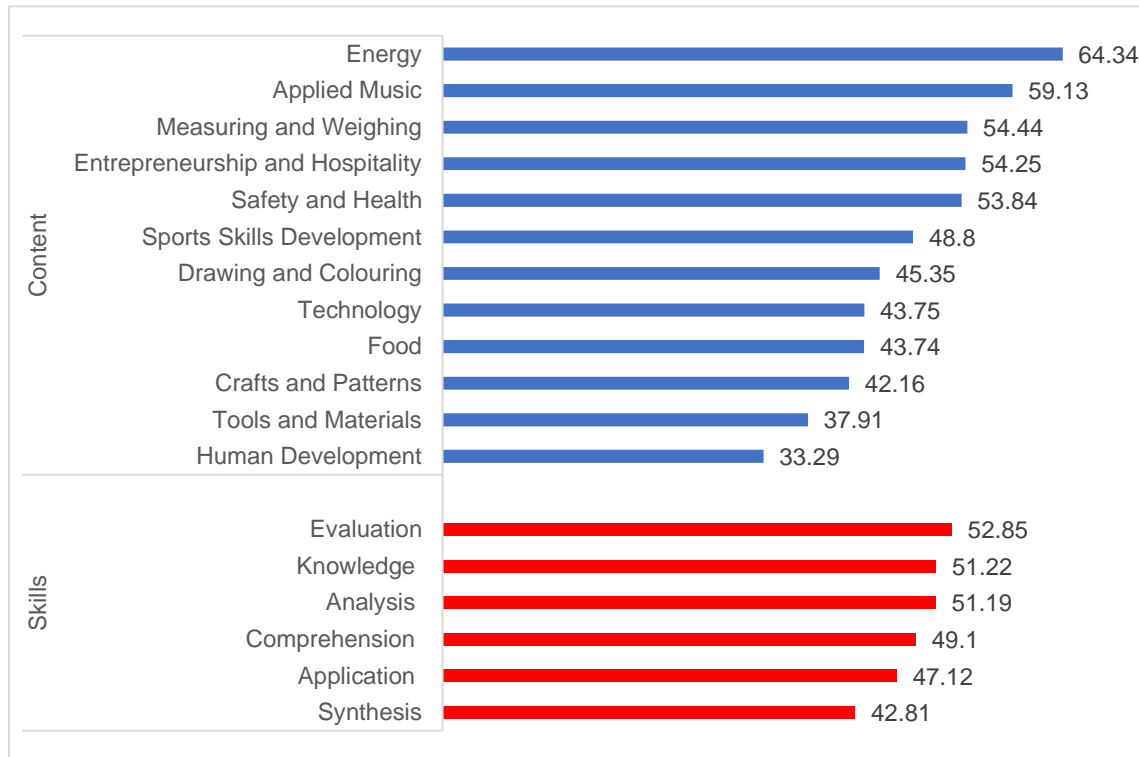


Figure 23: 2023 Creative and Technology Studies (CTS) Difficulty Index by Content Area/Cognitive Level

The following questions were well and not answered in the 2023 Creative and Technology Studies examination.

Well answered questions

Question 1: Applied Music

Question 2: Crafts and Patterns

Question 21: Tools and Materials

Question 41: Technology

Question 42: Technology

Question 43: Technology

Not well-answered questions

Question 18: Crafts and Patterns

Question 20: Sports Skills Development

Question 39: Crafts and Patterns

Question 58: Tools and Materials

Candidates' errors and misconceptions that could have led to poor performance in the above questions.

- i. Question 18: The question required candidates to identify a technical name used in crafts that comes about when Knotted strings are used to create a pattern. Amongst the answer options were applique, collage, macramé and mosaic. Most candidates opted for the less familiar term amongst the four options, applique, instead of the correct answer, macramé. This could indicate the need for teachers to ensure that they use technical terms in art that help them relate to and appreciate art.
- ii. Question 20: The item was on the specific skills in the game of volleyball under sports. Candidates failed to identify a digging pass as required. The majority went for bounce, confusing it with other sports games. This mixing up of sports skills indicated candidates' lack of knowledge of sports skills and, later on, lack of physical practice.

- iii. Question 39: The question required candidates to understand common types of weaves used in needlework. Over 50 per cent answered the question incorrectly, indicating a lack of basic principles and knowledge of weaves used in needlework. The correct answer was 'Plain,' but over 50 percent of the candidates chose the wrong answer, which was 'Basket,' which is not even a type of weave. This indicated a lack of knowledge and awareness of needlework and crafts.
- iv. Question 58: The question required candidates to understand Tools and Materials used in Technology. About 60 per cent answered the question incorrectly, indicating a lack of basic principles and knowledge of common tools and materials used for particular tasks. The nails in question were tucking nails used to fix textile materials to wood.

Suggestions for Improvement

- i. Teachers must complete the syllabi in all three contributory subjects of CTS.
- ii. CTS is practical (Hands-on) in most outcomes; teachers should engage learners in practical work to consolidate the concepts.
- iii. Teachers should give feedback from SBA results to detect challenges at an early stage and mitigate them.
- iv. Teachers should use concrete examples and synonyms when explaining concepts.
- v. Subject learners to a lot of exercises to reinforce learning.

4.7 Zambian Languages

- 4.7.1 In all seven Zambian Languages, questions were drawn from 6 content areas (topics) and across five cognitive levels. The analysis by content

area indicated that the topic ‘Language Structure’ across all seven languages had the highest proportion of candidates answering the items correctly (73.38%), followed by ‘Translation’ (69.83%). The topic with the least proportion of candidates answering items correctly was ‘Reading Comprehension’ (59.41%). Followed by ‘Composition’ (60.25%)

4.7.2 With regards to cognitive levels, the domain with the highest proportion of candidates answering items correctly was ‘Application’ (69.05%). The second highest was in the Comprehension domain (66.67%). The lowest proportion was recorded in Synthesis (58.27%). Refer to Figure 24.

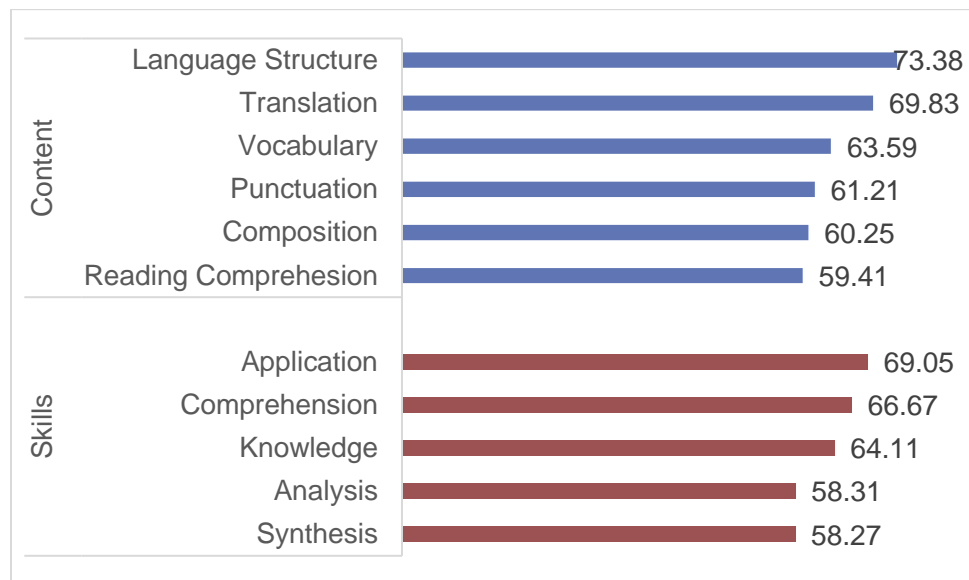


Figure 24: 2023 Zambian Languages Difficulty Index by Content Area/Cognitive Level

Factors that could have led to poor performance of questions in the above content/cognitive area

- i. Challenges in the use of approved orthography
- ii. Limited vocabulary
- iii. Not much attention was given to analysis and synthesis skills by teachers when teaching (Learners do less practice of the two skills)
- iv. Failure to cover the entire syllabus.

Suggestions for improvement

- i. Teachers to enhance the reading culture among candidates by engaging them in a lot of reading activities
- ii. Teachers should use materials with the approved orthography to expose learners to it.
- iii. Teachers to identify and help learners who have challenges in reading comprehension
- iv. Schools to procure enough teaching and learning materials
- v. Teachers need to expose the learners to all the cognitive skills

5.0 Grade 8 Progression Rates

- 5.1 The 2022 Grade 7 cohort was the last to progress automatically. This meant that the 2023 cohort had to meet the set progression criteria (scoring a minimum of 93 standard scores or 43 per cent in at least four subjects) to advance to grade 8.
- 5.2 Of the 454,213 candidates who sat the 2023 Grade 7 Composite Examination, 316,690 were selected to Grade 8, representing a national progression rate of 69.72 percent. Of the total selected, 151,559 (69.30%) were boys, while 165,131 (70.11%) were girls.

Table 4: 2019 to 2024; Grade 7 Progression Rates by Province

REGION	NUMBER SAT			NUMBER SELECTED			PERCENTAGE SELECTED						
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	2022	2021	2020	2019
MUCHINGA	9,884	9,548	19,432	7,238	6,737	13,975	73.23	70.56	71.92	100.00	100.00	100.00	100.00
NORTHERN	16,209	15,007	31,216	11,828	10,161	21,989	72.97	67.71	70.44	100.00	100.00	100.00	100.00
LUAPULA	14,189	13,938	28,127	10,381	9,224	19,605	73.16	66.18	69.70	100.00	100.00	100.00	100.00
SOUTHERN	32,320	33,626	65,956	18,738	21,225	39,963	57.96	63.12	60.59	100.00	100.00	100.00	100.00
EASTERN	21,894	23,702	45,596	15,531	15,979	31,510	70.94	67.42	69.11	100.00	100.00	100.00	100.00
COPPERBELT	30,839	35,067	65,906	24,448	28,514	52,962	79.28	81.31	80.36	100.00	100.00	100.00	100.00
NORTHWESTERN	16,125	17,583	33,708	10,865	11,883	22,748	67.38	67.58	67.49	100.00	100.00	100.00	100.00
CENTRAL	24,875	27,034	51,909	14,784	16,433	31,217	59.43	60.76	60.14	100.00	100.00	100.00	100.00
WESTERN	15,384	17,128	32,512	9,850	11,592	21,442	64.03	67.68	65.98	100.00	100.00	100.00	100.00
LUSAKA	36,958	42,893	79,851	27,896	33,383	61,279	75.48	77.83	76.84	100.00	100.00	100.00	90.01
TOTAL ZAMBIA	218,687	235,526	454,213	151,559	165,131	316,690	69.30	70.11	69.72	100.00	100.00	100.00	98.14

6.0 Conclusion

- 6.1 There were 502,670 candidates who entered the 2023 Grade 7 Composite Examination. Of these, 502,484 were from the Zambian schools and 186 from St. Jeff College in Johannesburg, South Africa. Generally, total candidature increased by 1.77 percent from 493, 932 in 2022. The number of boys who entered the examination was 242,149 (48.17%), while that of girls was 260,521(51.83%).
- 6.2 Absenteeism slightly increased from **8.99** percent in 2022 to **9.60** percent in 2023. Of the 242,149 boys and 260,521 girls who entered the examination, 23,360 (9.65%) and 24,914 (9.56%), respectively, were absent
- 6.3 Candidates' performance in the 2023 examination slightly decreased compared to 2022. The standard mean scores decreased in all subjects except Creative and Technology Studies (CTS).
- 6.4 The item analysis for the six teaching subjects— Mathematics, English, Integrated Science, Social Studies, Creative and Technology Studies, and Zambian languages—indicates that the trends in the difficulty levels for most topics and cognitive levels across the subjects were similar to those of 2022.
- 6.5 The analysis of candidates' Performance in Selected Subjects by content area and cognitive level is meant to provide useful information about problematic topics, misconceptions, and suggestions for improvement that teachers can use to improve their pedagogical skills and further address the slight decrease in performance projected by the mean scores in 2023 examinations.
- 6.6 Teachers and relevant stakeholders must use the valuable information in this report to address the deficiencies in knowledge, skills and values noted in the specific subjects, topics and cognitive domains and improve performance.