

NSC 2016 CHIEF MARKER'S REPORT

SUBJECT	GEOGRAPHY
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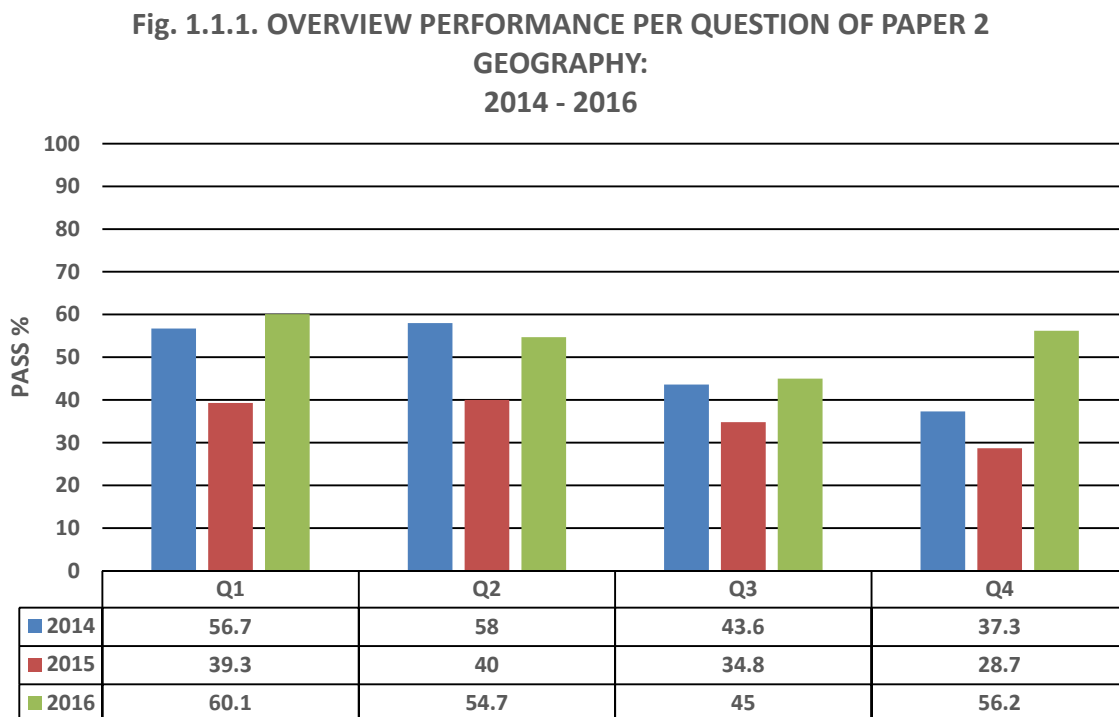
PAPER	PAPER 2
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DATE OF EXAMINATION:	02/11/2016	DURATION:	1.5
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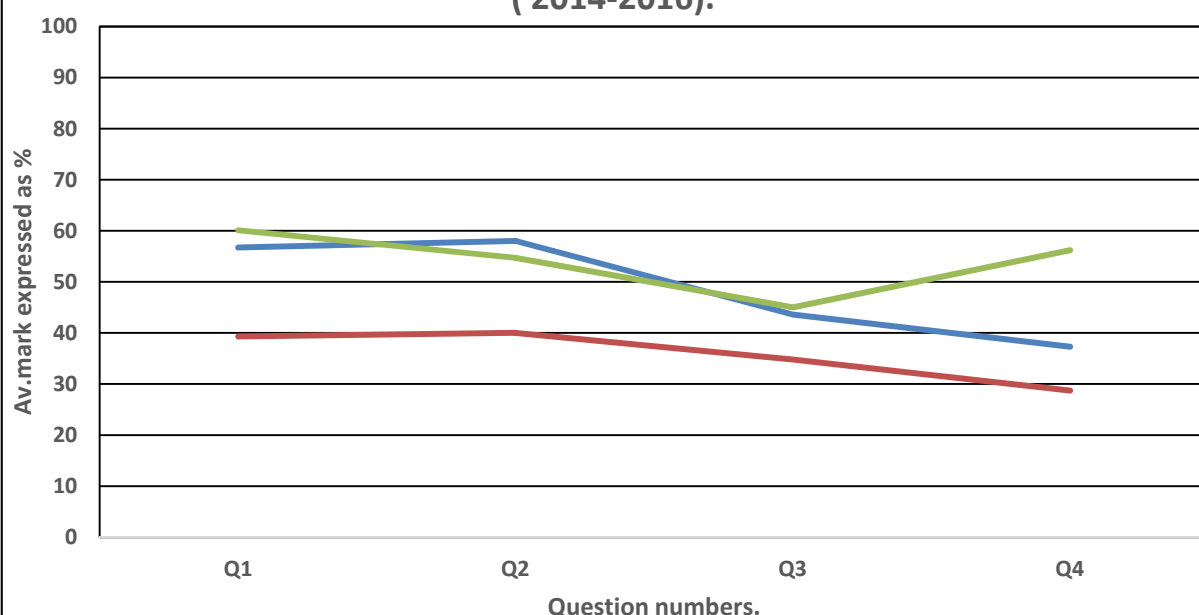
SECTION 1: (General overview of Learner Performance in the question paper as a whole)

The general performance of candidates in the 2016 NSC Geography paper 2 this year increased from 35.9% (2015) to 52.6% (2016). An improvement of 16.9% was recorded.

The bar and the line graphs below illustrate the trends in the general performance of learners in individual questions for the past three (3) years. Namely; 2014, 2015 and 2016.



**Fig.1.1.2. Overview performance per question in Geo. paper 2
(2014-2016).**



The above graphs (Figure 1.1.1 and 1.1.2), illustrate that general performance in Geography paper 2 varies from year to year and within particular questions. It is evident that learners consistently find questions 3 and 4 quite challenging. It is important to mention that these scores are based on the RASCH analysis of the randomly sampled 100 scripts from the 23 districts across the Eastern cape province. The randomly sampled scripts were selected to cover low (40%), medium (60%) and high scores (40%). Then the individual scripts were critically scrutinized by looking at a range of responses of candidates.

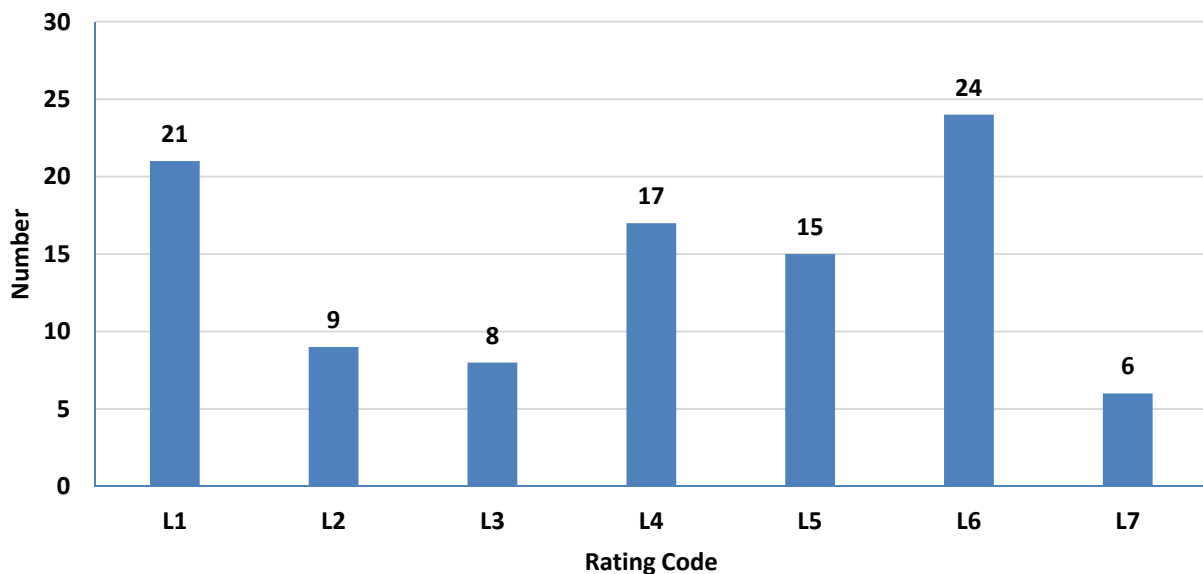
Table 1.1.3 and figure 1.1.4 show how the 100 randomly sampled scripts were selected.

Table 1.1.3

DISTRIBUTION							
Level	L1	L2	L3	L4	L5	L6	L7
%	0-29	30-39	40-49	50-59	60-69	70-79	80-100
No.	21	9	8	17	15	24	6

Figure 1.1.4

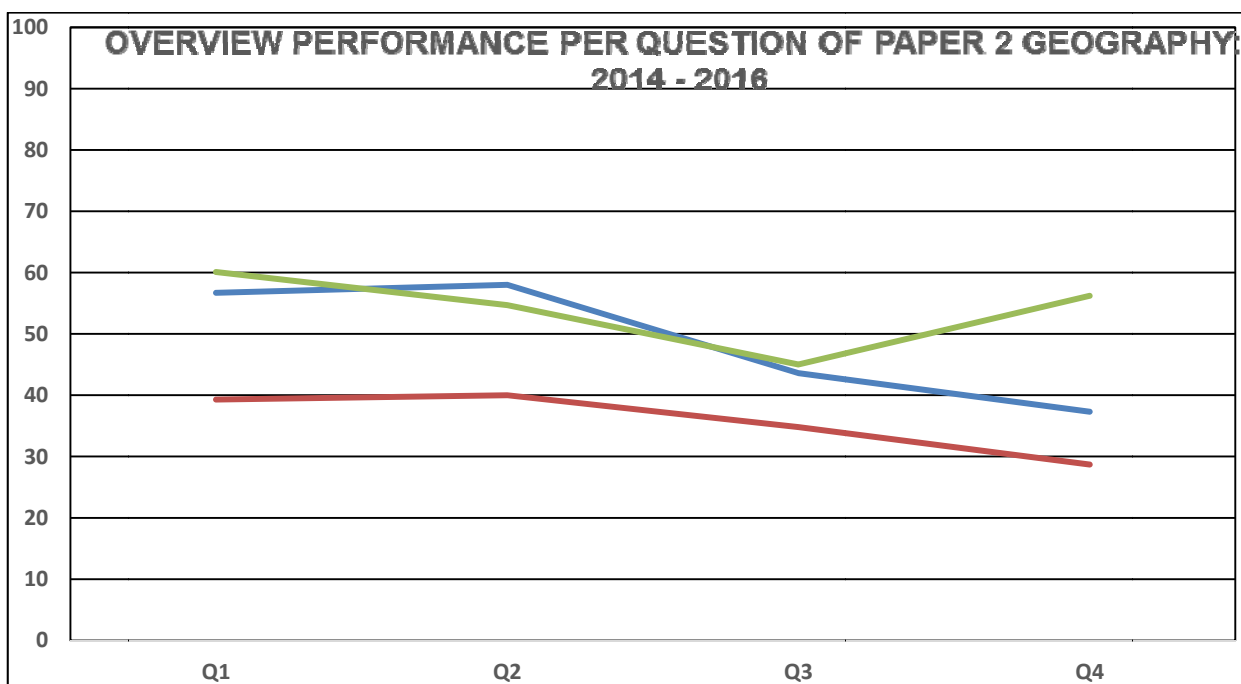
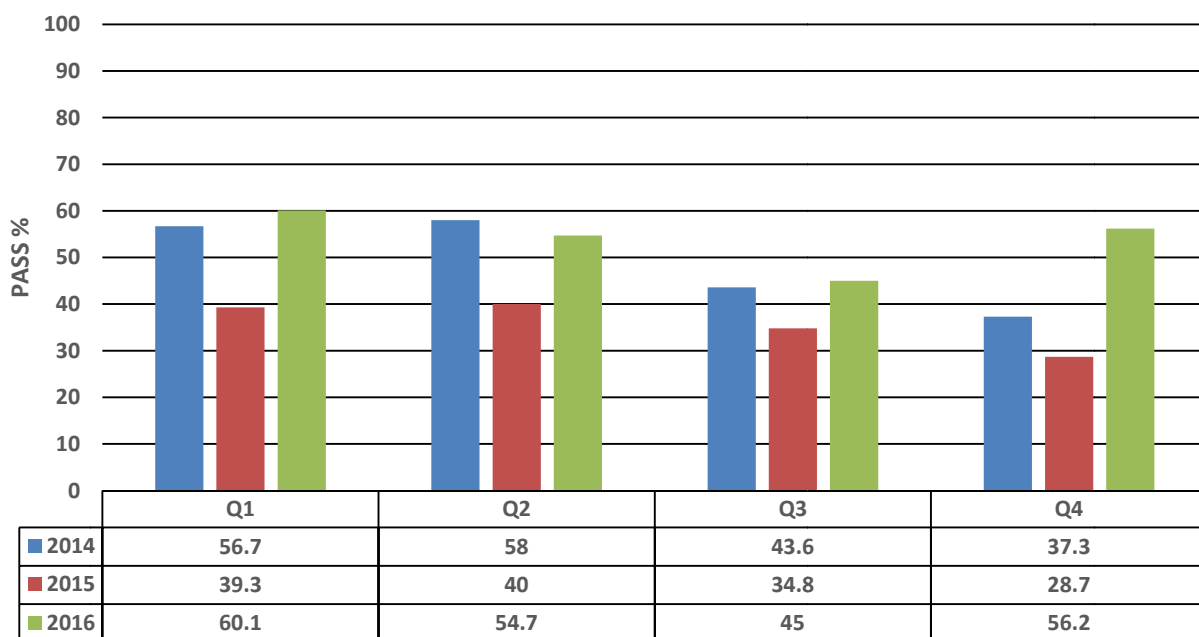
Distribution of Candidates



In analysing learner responses, particular attention was paid to common errors, misconceptions, strengths and weakness and possible causes thereof. It should be emphasized that even though there is an upward movement by 16.7% in learner performance, certain challenges still persist that need to be taken care of in the next academic year. Some of these challenges were raised in the previous diagnostic and examiners' reports but it is evident that there is very minimal or no movement at all in addressing them. The challenges include the following:

- That language proficiency still remains a big problem. This affected the ability of candidates to read instructions, interpret questions and resource materials and consequently provide appropriate responses to the questions. This may explain why learners struggle with question 3. It is surprising to note that even in questions where options are provided, learners are unable to pick/ choose the correct answer. Questions 2.1.1, 2.4.1 3.1.2 and 4.2.3 could cited as classic examples.
- Further, candidates were unable to distinguish and understand the subject terminology. For instance, they confused stream pattern with street pattern (question 1.7 and 1.8).
- Action/verbs such as like explain and suggest seem to confuse learners.
- Evidence also suggests that candidates lacked the understanding of specific subject concepts. For example, the central place town and sphere of influence.
- Most learners lack basic map and photo interpretation skills and as such they score very low marks in question 3.
- There is a great improvement in question 2 this year (54.7%) compared to 2015 (40%). However, learners are unable to measure accurately, use appropriate scale, and cannot substitute the formulae. Mixing and omitting units of measurements contribute to learners losing marks.
- It is worth noting that performance in question 4 improved this year from 28% (2015) to 56.2% (2016). However, a sizeable number are still struggling with this question, especially paper GIS which was examined for the first time.

OVERVIEW PERFORMANCE PER QUESTION OF PAPER 2 GEOGRAPHY: 2014 - 2016



SECTION 2: Comment on candidates' performance in individual questions

(It is expected that a comment will be provided for each question on a separate sheet).

QUESTION 1 : MULTIPLE CHOICE QUESTION.

- (a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?

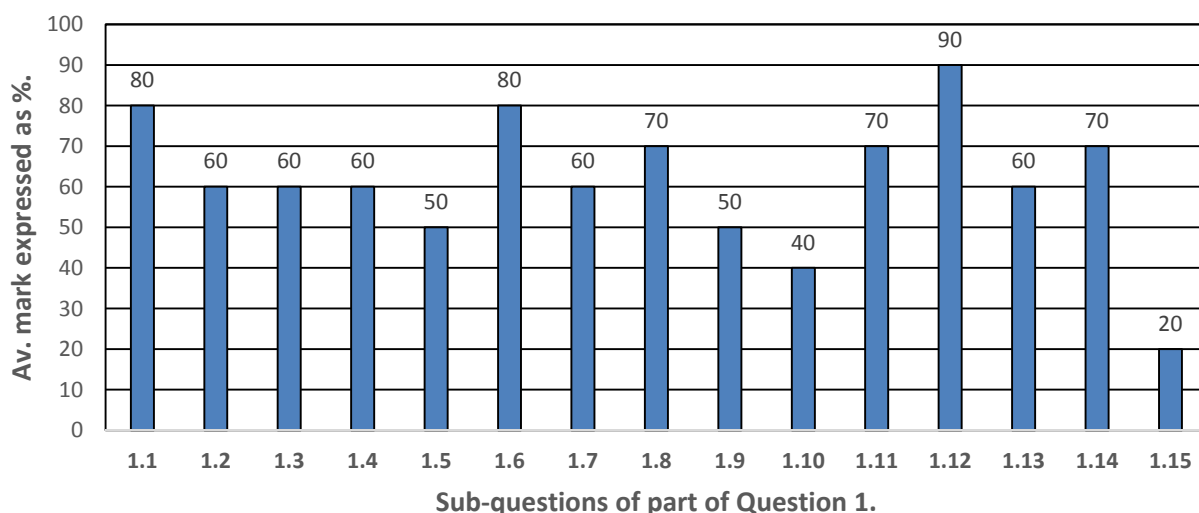
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Average mark from the sample of 100 :		60.1 %
SUB-QUESTION	TOPIC OR ASPECT TESTED	AVERAGE % FROM SAMPLE
1.1	Map index	80
1.2	True bearing	60
1.3	Feature causing environmental problems	60
1.4	Feature on orthophoto	60
1.5	Stream order	50
1.6	Direction – identify province	80
1.7	Stream pattern	60
1.8	Street pattern	70
1.9	Type of farming – co-ordinate	50
1.10	Slope type	40
1.11	Fluvial landform	70
1.12	Reason for industrial site	90
1.13	Land-use zone	60
1.14	Feature assisting purifying water	70
1.15	Type of town	20

See Graph below

- This question consists of 15 multiple choice questions focusing only on basic map reading skills.
- The graph below illustrates the general performance of learners in the various sub-questions of question 1. The performance is based on the RASCH analysis of the 100 scripts randomly sampled from the 23 education districts of the Eastern Cape Province.

Overview performance in question 1: Geo. Paper 2(2016)



- The general performance in this question improved from 39.3% (2015) to 60.1% (2016). An increase of 20.8% was recorded.
- The best performed sub-question was 1.12 (90%) and the worst performed sub-question 1.15 (20%).

(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.

- Even though question was favorably done compared to the previous years, there are still areas in which candidates still struggle.
- Learners cannot identify drainage patterns using the topographic maps (Q1.7); cannot use grid references to locate features (Q1.9) and worse still are unable to read and interpret symbols. (Q1.4).
- The integration of theory into map work is still a major problem. Question 1.15 was poorly answered because it required learners to apply their theoretical knowledge. It also appears that a number of learners were never exposed to the classification of towns.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Teachers should devote a period for map work. Map work is skills based and as such continuous use of topographic and orthophoto maps can never be over emphasized.
- The number of learners being enrolled in Geography is growing every year. The department should supply schools with both topographic and orthophoto maps. These should be used on a regular basis. The origin of such teaching resources should not only be for examinations.
- There is no substitute for quality and focused assessment. Teachers should be trained on how to set integrated multiple choice questions.

(d) Describe any other specific observations relating to responses of learners

- This is a multiple choice question with pre-determined options. Most of the learners' rush through the questions and only guess without applying their minds. Easy and simple questions are not answered. Some candidates even leave blank spaces. Otherwise, question 1 is straight forward question in which learners can score high marks.

(e) Any other comments useful to teachers, subject advisors, teacher development, etc.

- Map work must be taught in conjunction with theory, especially when dealing with climatology (micro- climates), geomorphology (fluvial processes and drainage patterns), and settlement (classification of settlements based on the function and internal structure and patterns of urban settlements).
- Subject advisors should organize map work workshops, focusing not only on content but also on pedagogical issues. The **"HOW I TEACH"** can be employed. This is intended to share a range of methods on how to teach map work.

QUESTION 2 : MAP CALCULATIONS AND TECHNIQUES

- (a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?**

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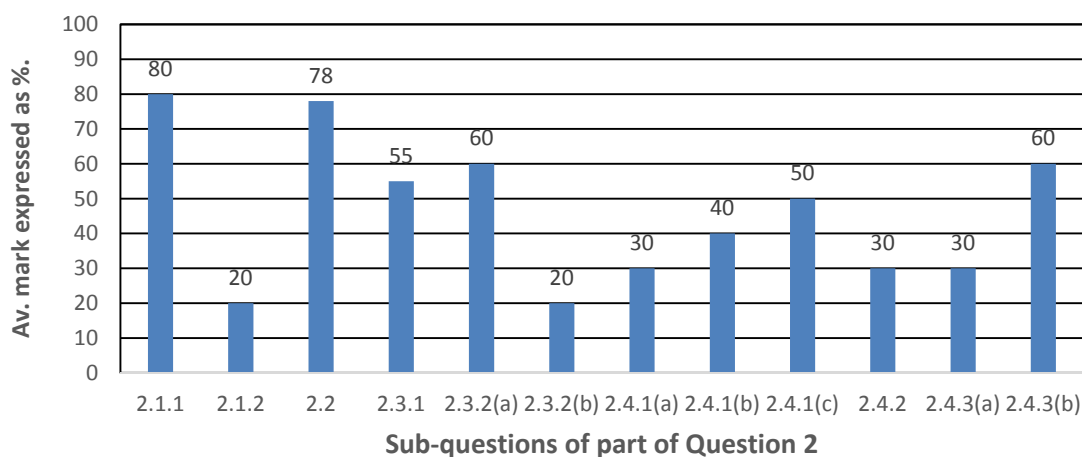
Average mark from the sample of 100 :		54.7 %
SUB-QUESTION	TOPIC OR ASPECT TESTED	AVERAGE % FROM SAMPLE
	MAP CALCULATIONS AND TECHNIQUES	
2.1.1	Magnetic bearing – will it get larger or smaller?	80
2.1.2	Give a reason	20
2.2	Calculate area	78
2.3.1	Match the two Gradients	55
2.3.2(a)	Which gradient is steeper	60
2.3.2(b)	Interpret the ratio of gradient	20
2.4.1(a)	Indicate the features on the cross section	30
2.4.1(b)	Indicate the features on the cross section	40
2.4.1(c)	Indicate the features on the cross section	50
2.4.2	Why person cannot see	30
2.4.1(a)	Vertical exaggeration as ratio	30
2.4.1(b)	Calculate vertical exaggeration	60

See Graph below

- The performance in this question ranged from good to poor, with an average of 54%. The learners' performance increased by 14.7%. That is, from 40% (2015) to 54.7% (2016). These scores are based on the RASCH analysis of the randomly sampled scripts.
- The graph below shows the average marks per sub-question expressed as percentage.



Overview performance in question 2: Geo.Paper 2(2016)



(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.

- In comparison with the previous year, candidates did fairly well. However, there are many common errors and misconceptions which resulted in learners getting low marks. These include:
- Candidates were unable to measure accurately and use the appropriate scale to calculate the area (Q 2.2).
- They omit and mix units of measurements even though this was clearly stated in the instruction. Learners lost marks for not indicating units in the final answer (Q2.2 and 2.4.3 (b)).
- In cases where learners managed to get the correct answer, they were unable to interpret the response they got (Q 2.1.2 and Q 2.3.2).
- Most learners had no skill of how to identify and indicate the features on the cross-section (Q2.4.1). It appears that there is less emphasis laid on this topic of map work by geography teachers. Most of the candidates were clueless.
- Calculating Vertical exaggeration is a big challenge to most learners. They do not understand what is involved and the steps involved. They had all sorts of writing the Vertical and horizontal scales. For example: V.S would be written as $V.S = 1 \longrightarrow 20 \times 100$ (2000) or $1 = 2000$.
- All in all, most learners lacked basic mathematical skills and such only do mathematical geography through rote memory.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- This question requires learners to have mastered the basic mathematical skills. This skill can only be developed through practice.
- It should be compulsory that mathematical instruments box be part of stationary for any learner doing Geography. Similarly, all Geography teachers MUST order and purchase meter rulers, chalk board protractors and dividers. This will enable teachers to demonstrate to learners on how to come up with accurate measurements. The philosophy of "GO **PRACTICAL**" must be adopted.



- Field work, which is part of the curriculum has to be emphasized. Teachers must include more activities on field sketch maps.
- When dealing with map calculations and techniques, teachers must go beyond getting the answer (numerical) but apply the answer to real life situation (Q 2.1.2, 2.3.2 (b) and 2.4.2).
- Scenarios and role plays are some of the teaching methodologies one can employ.

(d) Describe any other specific observations relating to responses of learners

- Generally, learners lack basic mathematical skills.
- They also lack interpretation skills and as a result they scored very low marks in questions that required them to interpret the answer they obtained (Q2.1.2 and 2.3.2 (b)).

(e) Any other comments useful to teachers, subject advisors, teacher development etc.

- There is need to develop an item bank with map work tasks that put emphasis on mathematical skills.
- When teaching mathematical calculations, deal with only ONE concept at a time and on the regular basis until learners master it.

QUESTION 3 : APPLICATION AND INTERPRETATION

(a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?

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Average mark from the sample of 100 :		45 %
SUB-QUESTION	TOPIC OR ASPECT TESTED	AVERAGE % FROM SAMPLE
3.1.1	Why farmer selected site	80
3.1.2	Crops stored in silo – primary, secondary, tertiary?	10
3.1.3	Site V reduced by flooding. Explain	60
3.1.4	Explain concept of mist from diagram	17.5
3.2	Direction river flow. Reason	36.7
3.3.1	Settlement pattern and primary activity	70
3.3.2	Evidence primary activity practised extensively	45
3.4.1(a)	Shape of settlement	40
3.4.1(b)	Reason	40
3.4.2	Location of settlements	55
3.5.1	Evidence of central place town	40
3.5.2	Impact of sphere of influence on town	30
3.5.3	Explain	45

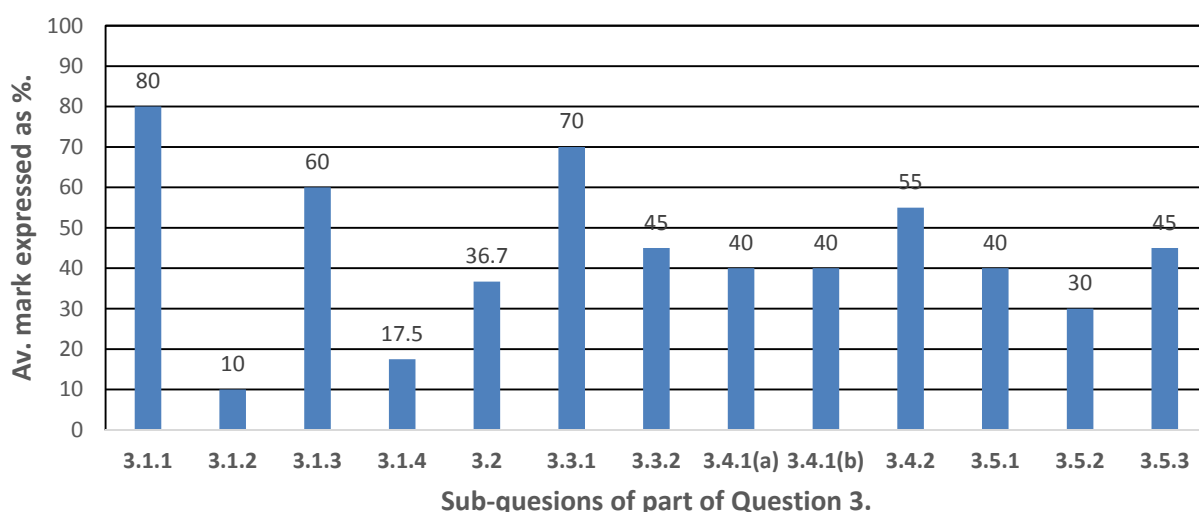
See Graph below

- The overall performance in question 3 improved from average of 34.8% (2015) to 45 % (2016). This increase translates into 10.2% upward movement.
- The graph below illustrates the average mark in each sub-question.



question 3. These scores are based on the randomly sampled scripts of 100 learners of the 23 districts of the Eastern Cape Province.

Overview performance in question 3: Geo. Paper 2(2016).



(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.

- This question had the lowest average mark compared to questions, 2 and 4.
- Learners lack map interpretation skills and lack insight. They struggle to understand and interpret questions.
- Further, learners do not understand the basic concepts and terminology and the application thereof. For instance, radiation fog in questions 3.1.2, they did not understand the concepts of primary, secondary and tertiary. Only 10% of the sampled learners managed to answer correctly. The concept of sphere of influence (Q3.5.2), confused most of the candidates. It appears that candidates are not well grounded.
- Most learners could not answer question 3.1.4 at all. Responses ranged from katabatic and anabatic winds to V and U-shaped river valley.
- Some candidates could not distinguish between contour lines and isobars (Q3.2), settlement and street patterns (Q.3.3.1), Central place and CBD (Q3.5.1). They had all concepts mixed up.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Most learners did not use map evidence to support their answer (Q.3.2 and Q 3.2.2 are some of the examples. This cost them marks.
- Learners treat map work as a complete different subject rather than linking it with content learnt in theory. That is why they would struggle to respond to questions that begin with a concept (Q 3.5.1).

(d) Describe any other specific observations relating to responses of learners

- Thorough teaching is required. Cover the content that is prescribed
- Teachers should develop their lessons by using concepts as a base.
- Drill learners on how to decode verbs and link to the responses required
- Work through paragraph questions to expose learners to different styles or ways in which questions are set.
- Do thorough revision before exams to help weaker learners with content and prepare stronger learners to get better marks.
- Topographic and orthophoto maps should be used as a resource when dealing with any topic in the teaching of Geography.
- Encourage learners to attend telematics lessons. This will improve their language proficiency and examination skills.

(e) Any other comments useful to teachers, subject advisors, teacher development etc.

- Teach map work concurrently with theory. This will enable learners to understand that theory and practical papers are interlinked.

QUESTION 4

- (a) General comment on the performance of learners in the specific question. Was the question well answered or poorly answered?

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Average mark from the sample of 100 :		56.2 %
SUB-QUESTION	TOPIC OR ASPECT TESTED	AVERAGE % FROM SAMPLE
	GEOGRAPHICAL INFORMATION SYSTEMS	
4.1.1	Define Data base	60
4.1.2	Use of orthophoto in database – give reasons	60
4.2.1.	Data layering using paper GIS	56.7
4.2.2	Which process used in GIS	50
4.2.3	Data storage method used in paper GIS	56.7
4.2.4	Indicate industry on paper GIS and reason	53.3

See Graph below

- The general learner performance moved from 24, 7% (2015) to 56.2% (2016). This is very encouraging in that for the past 2 years, GIS questions was poorly done.
- The graph below displays the average scores expressed as a percentage of the sub-question 4. These scores are based on the 100 randomly sampled scores drawn 23 districts of the province of the Eastern Cape.

- This is the most improved questions in terms of the average mark percentage obtained by learners. A difference of 27.5% between 2015 and 2016 was obtained.
- Even though this is encouraging, a great number of learners still struggle with GIS section as a whole. They struggled with GIS concepts (Q4.1.1 and Q4.2.2).
- Application of GIS to real life situation still poses a challenge. For instance, question 4.1.2 was a straight forward question but only 60% of the candidates managed to provide the correct response.
- Paper GIS was examined for the first time. A fair number of candidates managed to create paper GIS. This is quite encouraging.

(b) Why was the question poorly answered? Also provide specific examples, indicate common errors committed by learners in this question, and any misconceptions.

- There is lack of GIS knowledge in general.
- It appears that some learners were never taught.

(c) Provide suggestions for improvement in relation to Teaching and Learning

- Learners did not utilize the layers they work with to create paper GIS to respond to questions 4.2.4 and as a result they 3 marks.

(d) Describe any other specific observations relating to responses of learners

- Teachers must be taken through an intense GIS work shop, focusing on pedagogy.

(e) Any other comments useful to teachers, subject advisors, teacher development etc.

- Content gap workshops to be organized in which teachers would be sharing a different methods of teaching GIS.