

Report on the Quality Assurance of Assessment of the Benchmark Assessment Agency June 2017 GETC:
ABET Level 4 Examinations



Report on the Quality Assurance of Assessment of the Benchmark Assessment Agency June 2017 GETC: ABET Level 4 Examinations

July 2017

PUBLISHED BY:



37 General Van Ryneveld Street, Persequor Technopark, Pretoria **Telephone:** +27 12 349 1510 **Fax:** +27 12 349 1511 **Email:** info@umalusi.org.za



TABLE OF CONTENTS

| TABL | E OF CONTENTS | iii |
|--------|---|-----|
| EXEC | CUTIVE SUMMARY | ٧ |
| ACR | ONYMS AND ABBREVIATIONS | vii |
| LIST (| OF TABLES AND FIGURES | ix |
| СНА | PTER 1 MODERATION OF QUESTION PAPERS | 1 |
| 1.1 | Introduction | 1 |
| 1.2 | Scope and Approach | 1 |
| 1.3 | Summary of Findings | 2 |
| 1.4 | Areas of Good Practice | 8 |
| 1.5 | Areas of Concern | 8 |
| 1.6 | Directives for Compliance and Improvement | 8 |
| 1.7 | Conclusion | 8 |
| СНА | PTER 2 MODERATION OF SBA PORTFOLIOS | 9 |
| 2.1 | Introduction | 9 |
| 2.2 | Scope and Approach | 9 |
| 2.3 | Summary of Findings | 10 |
| 2.4 | Areas of Good Practice | 13 |
| 2.5 | Areas of Concern | 13 |
| 2.6 | Directives for Compliance and Improvement | 13 |
| 2.7 | Conclusion | 13 |
| СНА | PTER 3 MONITORING OF WRITING | 14 |
| 3.1 | Introduction | 14 |
| 3.2 | Scope and Approach | 14 |
| 3.3 | Summary of Findings | 15 |
| 3.4 | Areas of Good Practice | 17 |
| 3.5 | Areas of Concern | 17 |
| 3.6 | Directives for Compliance and Improvement | 18 |
| 3.7 | Conclusion | 18 |
| СНА | PTER 4 MONITORING THE MARKING | 19 |
| 4.1 | Introduction | 19 |
| 4.2. | Scope and Approach | 19 |
| 4.3 | Summary of Findings | 19 |
| 4.4 | Areas of Good Practice | 21 |
| 4.5 | Areas of Concern | 21 |
| 4.6 | Directives for Compliance and Improvement | 21 |
| 4.7 | Conclusion | 21 |

| CHA | PTER 5 MONITORING OF THE MARKING GUIDELINE DISCUSSIONS | 22 |
|--------|--|----|
| 5.1 | Introduction and Purpose | 22 |
| 5.2 | Scope and Approach | 22 |
| 5.3 | Summary of Findings | 22 |
| 5.4 | Areas of Good Practice | 24 |
| 5.5 | Areas of Concern | 25 |
| 5.6 | Directives for Compliance and Improvement | 25 |
| 5.7 | Conclusion | 25 |
| СНА | PTER 6 VERIFICATION OF MARKING | 26 |
| 6.1 | Introduction | 26 |
| 6.2 | Scope and Approach | 26 |
| 6.3 | Summary of Findings | 26 |
| 6.4 | Areas of Good Practice | 29 |
| 6.5 | Areas of Concern | 29 |
| 6.6 | Directives for Compliance and Improvement | 29 |
| 6.7 | Conclusion | 29 |
| СНА | PTER 7 STANDARDISATION AND VERIFICATION OF RESULTS | 30 |
| 7.1 | Introduction | 30 |
| 7.2 | Scope and Approach | 30 |
| 7.3 | Standardisation and Resulting | 30 |
| 7.4 | Areas of Good Practice | 31 |
| 7.5 | Areas of Concern | 31 |
| 7.6 | Directives for Compliance and Improvement | 31 |
| 7.7 | Conclusion | 31 |
| A NINI | EYIDEC | 32 |

EXECUTIVE SUMMARY

Umalusi, as mandated by the General and Further Education Quality Assurance Act (Act No. 58 of 2001, as amended in 2008), conducts quality assurance for all assessment processes at exit-points for all qualifications registered in its sub-framework. The quality assurance processes include the following:

- Moderation of Question Papers;
- Moderation of Internal Assessment;
- Monitoring of the different phases of the examinations;
- Monitoring meetings for the Standardisation of Marking Guidelines;
- Verification of Marking;
- Standardisation and Resulting; and
- Approval for the Release of Results.

The findings from the above-mentioned quality assurance processes enable members of Umalusi's Council to decide whether Umalusi should accept and ratify the results of the examinations or not.

Benchmark Assessment Agency (BAA) applied for accreditation to conduct the GETC: ABET Level 4 examinations. They were allowed to conduct a pilot project in conducting GETC: ABET Level 4 examinations in two learning areas. Following their application for accreditation, the Benchmark Assessment Agency (BAA) has since 2014 conducted, as a pilot project, the November General Education and Training Certificate (GETC): Adult Education and Training (ABET) Level 4 examinations. From this year (2017), BAA will conduct the GETC: ABET Level 4 examinations twice per year, in June and November. Examinations are conducted in only two learning areas, i.e., Communication in English and Mathematical Literacy.

This report provides the findings of the following quality assurance processes:

- Moderation of Question Papers (Chapter 1);
- Moderation of Site-Based Assessment Portfolios (Chapter 2);
- Monitoring of Writing (Chapter 3);
- Monitoring of Marking (Chapter 4);
- Marking Guideline Discussions (Chapter 5);
- Verification of Marking (Chapter 6);
- Standardisation and Resulting (Chapter 7); and
- Certification (Chapter 8).

Each chapter of the report will indicate the scope and approach, findings, areas of good practice, areas of concern and recommendations, and provides directives for compliance and improvement.

Chapter 1 deals with moderation of question papers. Umalusi conducts external moderation of examination question papers and marking guidelines to ensure that quality standards are maintained for the GETC: ABET Level 4 examinations. This is a critical quality assurance process to ensure that the examination papers are, fair, valid and reliable. The moderation process also ensures that the question papers are of the appropriate format and are technically of a high quality.

The purpose of this chapter is to give an overview of the standard and quality of the externally moderated question papers. This chapter summarises the findings of the analyses of external moderator reports on the moderation of question papers and the accompanying marking guidelines. It must be noted that this report is based on the final moderation reports, where question papers had been approved and all identified anomalies addressed.

Chapter 2 focuses on the moderation of site-based assessment (SBA) portfolios as evidence of the internal assessment process conducted at the sites of learning. The GETC: ABET Level 4 qualification requires SBA

to be conducted by providers. Assessment bodies set SBA tasks nationally, moderate them internally and submit these SBA tasks to Umalusi to be externally moderated. Umalusi is responsible for determining the quality and appropriateness of the standard of these tasks.

The purpose of external moderation of SBA is to establish the scope, extent and reliability of SBA. It is of utmost importance to moderate SBA portfolios since internal assessment carries the same weight as the external examinations.

Chapter 3 deals with the monitoring of the writing phase of examinations. Assessment bodies have total responsibility for the credible conduct, administration and management of the writing phase of examinations.

Umalusi deploys monitors while the examinations are being written to check that rules and regulations applicable to the conduct of examinations are complied with. This monitoring is also important to identify any irregularities that may occur during the writing of the examinations.

Chapter4focuses on the monitoring of the marking phase of the examinations. Monitors visit the marking venues to evaluate the readiness and effectiveness of the assessment body's preparations for marking. The process is monitored to ascertain both the credibility and management of the marking taking place at the BAA marking centre.

Chapter 5 discusses the monitoring of marking guideline discussions. The marking guideline discussion meetings provide a platform for markers, chief markers, examiners, internal moderators and Umalusi's moderators to standardise and approve the final marking guidelines to be used to mark candidates' scripts. Although the marking guidelines are presented together with the question papers during the moderation process, it is necessary for marking guidelines to be discussed with the marking personnel to ensure that all corrections and additions are agreed upon and that changes and additions made are approved by external moderators. This process ensures that all markers have a common understanding of how to mark candidates' responses. This is aimed at eliminating inconsistencies during marking.

Chapter 6 deals with the verification of marking of candidates' scripts. External moderators sample a number of marked and/or moderated scripts to verify the quality of marking. Adherence to approved marking guidelines and accuracy of totalling and transfer of marks are, among other, checked. This process aims at assuring that marking is conducted in a fair, valid, credible and accurate manner. The performance of candidates is also analysed and compared per question.

Chapter 7 reports on the standardisation of results. According to the GENFETQA ACT, 2001 as amended 2008 Section 17A. (4), The Council may adjust raw marks during the standardisation process. This is the statistical adjustment of results to mitigate the effects on performance of factors other than learners' ability and knowledge, to reduce the variability of marks from examination to examination. Standardisation involves various processes that are intended to ensure that the procedure is carried out accurately. These include the verification of subject structures and electronic data booklets, development of norms and the approval of adjustments.

Benchmark Assessment Agency submitted the cohort profile of learners who wrote the June 2017 GETC: ABET Level 4 examinations. Twelve centres wrote Communication in English question paper. There were 86 candidates, 30 from the manufacturing sector, who sat for the examination in this learning area. Forty-seven candidates from 8 centres wrote Mathematical Literacy question paper. Sixty-one percent of them also came from the manufacturing sector. The cohort profile is included as annexure A and annexure B in this report.

ACRONYMS AND ABBREVIATIONS

ABET Adult Basic Education and Training

AET Adult Education and Training

ASC Assessment Standards Committee

CAT Common Assessment Tasks

CLC Community Learning Centres

DHET Department of Higher Education and Training

EA Examination Assistants

EAG Examination and Assessment Guideline

GETC General Education and Training Certificate

LA Learning Area

NQF National Qualifications Framework

PALC Public Adult Learning Centre

PED Provincial Education Department

QAA Quality Assurance of Assessment

QP Question Paper

SAGs Subject and Assessment Guidelines

SAQA South African Qualifications Authority

SBA Site based assessment

SOR State of Readiness

UMALUSI Council for Quality Assurance in General and Further Education and Training

LIST OF TABLES AND FIGURES

| Table/Figure | Description | Page |
|--------------|--|------|
| Table 1A | Criteria for the moderation of question papers | 1 |
| Table 1B | Number of question papers approved at each moderation level | 2 |
| Figure 1A | Comparison of the Approval Level of Communication in English Question Papers in November 2016 and June 2017 | 3 |
| Figure 1B | Comparison of the Approval Level of Moderation of Mathematical Literacy Question Papers in November 2016 and June 2017 | 3 |
| Figure 1C | Percentage of Overall Compliance of Question Papers at First Moderation | 4 |
| Table 1C | Compliance of question papers per criterion | 5 |
| Figure 1D | Percentage Compliance of Communication in English at First and Second Moderation Level | 5 |
| Figure 1E | Percentage compliance of Mathematical Literacy at first and second moderation | 6 |
| Table 2A | SBA Portfolio Sample | 9 |
| Table 2B | Quantitative Analysis of AET Sites Moderated | 10 |
| Figure 2A | No. of SBA Portfolios Meeting Criteria at Various Levels of Compliance: Communication in English | 11 |
| Figure 2B | No. of SBA Portfolios Meeting Criteria at Various Levels of Compliance: Mathematical Literacy | 11 |
| Table 3A | List of Examination Centres, Subjects and Number of Candidates | 14 |
| Table 3B | List of Concerns | 17 |
| Table 4.1 | Number of Scripts and Markers per Learning Area | 19 |
| Table 5A | Changes Made to the Marking Guideline during Discussions | 23 |
| Table 5B | Changes Made to the Communication in English Marking Guideline | 24 |
| Table 6A | Scripts Sampled for Verification of Marking | 26 |
| Table 7A | Standardisation Decisions | 31 |
| Annexure | Annexure A | 32 |
| Annexure | Annexure B | 33 |

CHAPTER 1 MODERATION OF QUESTION PAPERS

1.1 Introduction

Umalusi conducts external moderation of examination question papers and marking guidelines to ensure that quality standards are maintained in all examination cycles for the General Education and Training Certificate (GETC): Adult Basic Education and Training (ABET) Level 4 examinations.

The moderation of question papers is a critical part of the quality assurance process, to ensure that the examination papers are, fair, valid and reliable. The moderation process also ensures that the question papers have been assembled with rigour and comply with Umalusi Quality Assurance of Assessment requirements and the assessment guideline documents of the assessment bodies.

1.2 Scope and Approach

Benchmark Assessment Agency (BAA) submitted four GETC: ABET Level 4 question papers and the accompanying marking guidelines for external moderation by Umalusi's moderators in April 2017. Two out of the four question papers submitted were back-up papers, one per learning area. This report focuses on the two question papers that were written in the June 2017 GETC: ABET Level 4 examinations. The moderation of the 2017 June GETC: ABET Level 4 examination question papers was conducted in Mathematical Literacy and Communication in English.

Umalusi employs moderators who have relevant learning area expertise to scrutinise and carefully analyse the question papers developed by BAA for the GETC: ABET Level 4 examinations. The BAA is expected to appoint examiners with requisite learning area knowledge of setting question papers; and internal moderators to moderate the question papers before they are presented to Umalusi for external moderation.

Umalusi moderates question papers based on a set of criteria to confirm that they meet the quality assurance requirements and that the standard of the paper adheres to policy requirements. To maintain public confidence in the national examination system, question papers must be seen to be relatively:

- Fair;
- Reliable;
- Representative of an adequate sample of the curriculum;
- Representative of relevant conceptual domains;
- Representative of relevant levels of cognitive challenge.

The moderation of question papers was conducted using the Umalusi instrument for the moderation of question papers, which consists of eight criteria. Each criterion has a number of quality indicators. Table 1A below summarises the criteria and the number of quality indicators used to moderate question papers and marking guidelines presented by BAA.

Table 1A: Criteria for the Moderation of Question Papers

| No. | Criteria | No. of Quality Indicators |
|-----|--|---------------------------|
| 1 | Technical Aspects | 12 |
| 2 | Language and Bias | 8 |
| 3 | Internal Moderation | 4 |
| 4 | Content Coverage | 12 |
| 5 | Cognitive Skills/Demand | 6 |
| 6 | Adherence to Subject and Assessment Guidelines (SAG) | 4 |
| 7 | Predictability | 3 |
| 8 | Marking Guideline | 11 |
| 9 | Overall Impression | 6 |

The question papers and their marking guidelines, subjected to the Umalusi instrument, are expected to meet all or most criteria before they are approved. A question paper that does not comply sufficiently with most criteria must be moderated more than once. In this report only the final moderation reports were analysed to ascertain the levels of compliance, or lack thereof, according to the Umalusi instrument. It is important to note that all the concerns identified during the first moderation were to be addressed before the question paper was submitted for subsequent moderations and approval.

Moderation of question papers was conducted off-site by Umalusi moderators. Question papers were couriered to the external moderators' physical addresses. Question papers were moderated and sent back to the assessment body with comments, decisions and recommendations to be effected. Safety and security of the question papers and marking guidelines was ensured.

1.3 Summary of Findings

Umalusi assigned one external moderator per question paper to conduct the external moderation and approval of the two 2017 June GETC: ABET Level 4 examination question papers. The moderators had to be satisfied with the question paper before giving it a stamp of approval. The findings summarised below show the number of moderations conducted for each question paper before approval, the overall compliance and the levels of compliance per criterion of the question papers and their respective marking guidelines, at the first and final moderations.

1.3.1 Compliance per Moderation Level

It is desirable that all question papers are approved at first moderation; however, Table 1B indicates that all four question papers were conditionally approved with resubmission during the first moderation. All four question papers were finally approved after the second moderation. There were no question papers that had to undergo more than two moderation levels. This report will focus on the two question papers that were written during the June 2017 examinations.

Table 1B: Number of Question Papers Approved at Each Moderation Level

| Learning Area | First Moderation | | Second Moderation | | | | |
|--------------------------|------------------|-----|-------------------|--|----|-----|----|
| | Α | CAR | R | | Α | CAR | R |
| Communication in English | 0 | 0 | 1 | | 12 | 12 | 12 |
| Mathematical Literacy | 0 | 0 | 1 | | 8 | 8 | 8 |
| Total | 0 | 0 | 2 | | 4 | 4 | 4 |

A-Approved CAR-Conditionally Approved: Resubmit R-Rejected

Figure 1A and Figure 1B below show a comparison (in %) of the approval level of the 2017 June GETC: ABET Level 4 examination question papers with that of the 2016 November GETC: ABET Level 4 examination question papers per learning area.



Figure 1A: Comparison of the Approval Level of Communication in English Question Papers in November 2016 and June 2017

There is a significant difference in the level in which Communication in English question papers were approved in June 2017 when compared with November 2016. In November 2016, the Communication in English question paper was approved at first moderation while it was approved at second moderation in June 2017.

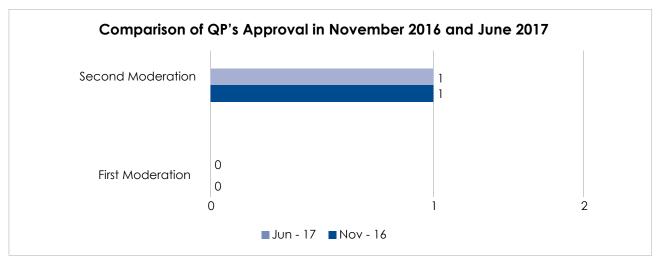


Figure 1B: Comparison of the Approval Level of Moderation of Mathematical Literacy Question Papers in November 2016 and June 2017

There is no difference in the level at which Mathematical Literacy question papers were approved in both November 2016 and June 2017 examination cycles. In both examination cycles, both question papers had to undergo second moderation before they were approved.

1.3.2 Compliance per Question Paper

Figure 1C below shows the overall compliance level of the 2017 June GETC: ABET Level 4 Communication in English and Mathematical Literacy examination question papers after the first and second moderation. The overall compliance levels were calculated by combining compliance of each question paper with all the prescribed criteria.

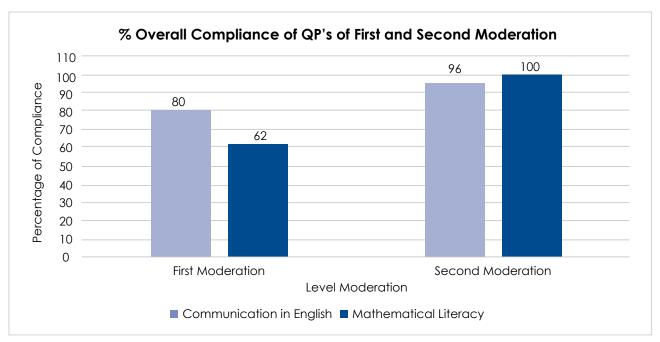


Figure 1C: Percentage of Overall Compliance of Question Papers at First Moderation

Neither of the two question papers met all the criteria/requirements at first moderation. Communication in English met 80% overall compliance at first moderation and it was rejected. The question paper met none of the quality indicators in the overall impression criterion, had limited compliance in technical aspects, and marking guideline criteria, during the first moderation level.

The Mathematical Literacy question paper met only 62% overall compliance at first moderation and it was rejected. The question paper met none of the quality indicators in the internal moderation and overall impression criteria, had limited compliance in content coverage, cognitive demand, adherence to assessment guidelines and predictability criteria during the first moderation.

When the question papers were submitted for second moderation, all corrections and recommended changes were made. At approval, both question papers met most or all criteria and were approved. Figure 1C above also indicates the overall compliance levels of both question papers when they were approved after the second moderation.

The Communication in English question paper met 96% overall compliance and it was approved subject to minor technical corrections. The question paper met all quality indicators of all criteria except in the technical aspect, internal moderation and content coverage, where the question paper met most quality indicators.

When the Mathematical Literacy question paper was submitted for second moderation, all corrections, recommended changes were made, and the question paper was 100% compliant. All quality indicators of all criteria were fully met. The question paper was approved after second moderation.

1.3.3 Compliance per Criterion

Despite the relatively high levels of overall compliance indicated in Figure 1C above, the levels of compliance according to the different criteria varied considerably, as shown in Table 1C below.

Table 1C: Compliance of Question Papers per Criterion

| No. | Criteria | Communication in English (%) | | Mathematic | al Literacy (%) | |
|-------------------------------|---------------------|------------------------------|---------|------------|-----------------|--|
| | | 1st Mod | 2nd Mod | 1st Mod | 2nd Mod | |
| 1 | Technical Aspects | 75 | 92 | 83 | 100 | |
| 2 | Language and Bias | 100 | 100 | 100 | 100 | |
| 3 | Internal Moderation | 67 | 83 | 1 <i>7</i> | 100 | |
| 4 | Content Coverage | 96 | 96 | 72 | 100 | |
| 5 | Cognitive Demand | 83 | 100 | 60 | 100 | |
| 6 | Adherence to SAG | 75 | 100 | 50 | 100 | |
| 7 | Predictability | 100 | 100 | 67 | 100 | |
| 8 | Marking Guideline | 45 | 100 | 90 | 100 | |
| 9 | Overall Impression | 83 | 96 | 17 | 100 | |
| Percentage Overall Compliance | | 80 | 96 | 62 | 100 | |

This indicates that the Communication in English question paper was compliant in all respects, or met all quality indicators (100%), in: language and bias; cognitive demand; adherence to assessment guidelines; predictability; and marking guideline criteria. Communication in English was compliant in most respects with: technical criteria; internal moderation; content coverage; and overall impression of the question paper, with compliance levels of between 83 and 96%. Internal moderation had the lowest percentage of compliance, at 83%. The overall compliance of this question paper was 80% at first moderation and 96% on approval after the second moderation. Figure 1E compares the compliance level of the Communication in English question paper per criteria at first and second moderation.

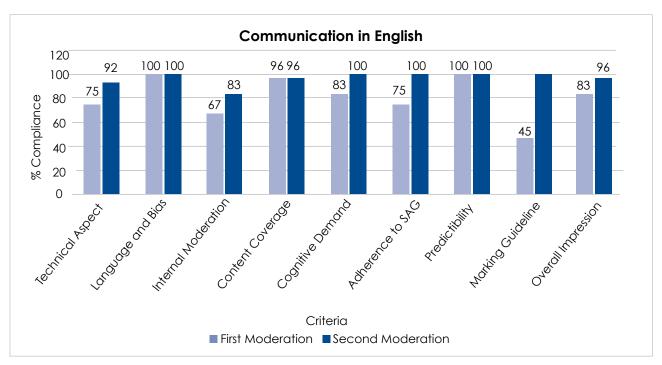


Figure 1D: Percentage Compliance of Communication in English at First and Second Moderation Level

The Mathematical Literacy question paper met all quality indicators in only the predictability criterion and its overall compliance was 62% after first moderation. This was a limited compliance level. The question paper could not be approved and had to be resubmitted for second moderation. After second moderation, the question paper met all quality indicators for each criterion and compliance was at 100%.

Figure 1F compares the compliance level of the Mathematical Literacy question paper per criterion at first and second moderation.

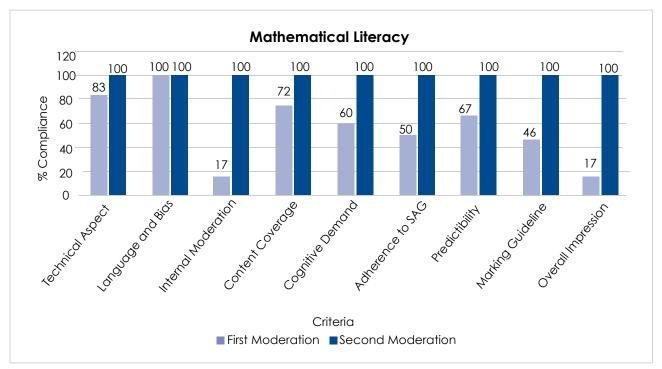


Figure 1E: Percentage Compliance of Mathematical Literacy at First and Second Moderation

1.3.4 Question Paper and Marking Guideline Moderation Criteria

The following comments about the criteria are based on the first and second moderation levels. Compliance in all respects refers to satisfying all the quality indicators within a criterion. All the identified problems were addressed in subsequent moderations; hence, both question papers were compliant in all respects at final approval. The discussion below summarises the findings.

a) Technical Aspects

From the analysis of data as displayed in Table 1C above, the technical aspect is one of the criteria with quality indicators that were not fully met in both the Communication in English and Mathematical Literacy question papers during first moderation. Some technical problems identified at the first moderation included: non-submission of a file with a full history of question paper (both question papers); cluttered layout (Mathematical Literacy); poor quality of illustrations; and non-adherence to the format requirements stipulated in the SAG documents, in both learning areas. These challenges were addressed when question papers were submitted for the second moderation.

b) Language Bias

Both the Communication in English and Mathematical Literacy question papers were 100% compliant with regard to language bias. All quality indicators were fully met in both learning areas.

c) Internal Moderation

The standard of internal moderation was 67% compliant in the Communication in English and 17% in the Mathematical Literacy question papers at first moderation. Some of the challenges identified in both were: there were internal moderation reports for both question papers but there was no evidence that internal moderation was conducted; the quality, standard and relevance were not appropriate; there was no evidence that internal moderators' recommendations were implemented; technical errors present could have been identified and corrected during internal moderation; and incorrect responses, or wrongly calculated answers, especially in Mathematical Literacy. These were all corrected when the question papers were submitted for the second moderation.

d) Content Coverage

Communication in English was 96% compliant and Mathematical Literacy 72% compliant with this criterion at first moderation. More concerns, regarding content coverage, were raised in Mathematical Literacy. Some of the problems identified in Mathematical Literacy during the first moderation were: insufficient coverage and spread of Specific Outcomes and Assessment Standards; lack of depth and levels of learning area content knowledge; source material that was not functional, not relevant and inappropriate. Some of the instructions, examples and illustrations in Communication in English paper were not clear, which could have led to confusion for some candidates. All these challenges were corrected when the question papers were submitted for the second moderation.

e) Cognitive Skills

Communication in English was 83% compliant at first moderation and Mathematical Literacy 60% compliant with this criterion at first moderation. In both, distribution of items in terms of cognitive level was inappropriate and not in line with the SAG. When both question papers were submitted for second moderation, they complied with all quality descriptors. The compliance level of both question papers with regard to this criterion was 100% and they were approved.

f) Adherence to Subject and Assessment Guidelines

At first moderation, Communication in English and Mathematical Literacy were 75% and 50% compliant, respectively, with this criterion. These question papers were not in line with the requirements of the SAG documents. At approval after the second moderation, both were fully compliant, at 100%.

g) Predictability

From the analysis of data displayed in Table 1C above, it is evident that Communication in English was 100% compliant and Mathematical Literacy met only 67% compliance with this criterion at first moderation. The Mathematical Literacy question paper lacked an appropriate degree of innovation. When the question paper was moderated for the second time, questions set showed a great level of creativity and were not predictable. The compliance level had increased to 100% when the question paper was approved.

h) Marking Guidelines

The level of compliance with the marking guidelines criterion was the lowest, at 45%, for Communication in English during the first moderation. Compliance of Mathematical Literacy was acceptable at 90%. Non-compliance with this criterion identified in Communication in English included: the language of the marking guideline did not match that of the question paper; incorrect responses; typographical or language errors; inability to facilitate consistent marking; and inaccuracy of the marking guidelines. All these errors were corrected before the question papers were submitted for second moderation. At approval, both question papers were 100% compliant with this criterion.

i) Overall Impression

The compliance level of the Communication in English question paper with this criterion was 83% at first moderation. The level of compliance here was the lowest, at 17%, in Mathematical Literacy during the first moderation. Non-compliance with this criterion included: non-adherence to SAG in most respects; a number of errors in both the question paper and marking guideline; inappropriate distribution of questions in terms of cognitive levels; poor quality of internal moderation; lack of innovation leading to a degree of predictability (Mathematical Literacy); and unacceptable standard of question papers.

All these problems were addressed when the question papers were submitted for the second moderation. When the question papers were approved, the compliance levels were 96% for Communication in English and 100% for Mathematical Literacy.

1.4 Areas of Good Practice

The following area of good practice was noted:

• The BAA is commended for setting and submitting a set of back-up question papers and marking guidelines for external moderation.

1.5 Areas of Concern

The following were identified as areas of concern:

- The poor quality of internal moderation of question papers: the quality of final question papers is affected by errors that are not identified and corrected during internal moderation;
- Both question papers were approved only at second moderation;
- Numbering of questions in the Mathematical Literacy impacts on the length of the question paper.

1.6 Directives for Compliance and Improvement

The BAA is required to act on the following directive for compliance and improvement:

• BAA must strengthen the training of examiners and internal moderators to improve the quality of question papers and internal moderation.

1.7 Conclusion

This chapter summarised the findings of the moderation of question papers for the 2017 June GETC: ABET Level 4 examinations. External moderators reported in detail regarding the question papers that were finally approved. The report also highlighted areas of good practice, areas of concern and provided directives for compliance that the BAA will need to address to ensure that all question papers are approved at the first level of moderation.

CHAPTER 2 MODERATION OF SBA PORTFOLIOS

2.1 Introduction

Site-based assessment (SBA) is a compulsory component of the GETC: ABET Level 4 qualification. The SBA is important because it contributes 50% towards the final mark in each learning area. The assessment body sets SBA tasks, moderates them internally and submits these to Umalusi for external moderation. Umalusi is responsible for determining the quality and appropriateness of the standard of these tasks.

SBA tasks for Communication in English and Mathematical Literacy were implemented and marked at site level.

Umalusi conducted external moderation of SBA to assess its quality and standard, as quality-assured by BAA. The external moderation of SBA is an important quality assurance process, because such moderation:

- Ensures that the SBA complies with national policy guidelines and Umalusi directives;
- Establishes the scope, extent and reliability of SBA across all assessment bodies offering the qualification;
- Verifies internal moderation of both the set tasks and the completed tasks;
- · Identifies challenges to this aspect of assessment and recommends solutions; and
- Reports on the quality of SBA within assessment bodies.

The SBA tasks that were implemented were set, moderated and approved in March 2016. These tasks were used for the 2016 November GETC: ABET Level 4 examinations. Their lifespan is two years thus they remained valid for the 2017 examinations.

2.2 Scope and Approach

BAA submitted the SBA portfolios for Communication in English and Mathematical Literacy for the 2017 June GETC: ABET Level 4 examinations to be moderated by Umalusi. Both educators' Portfolios of Assessment (POAs) and students' Portfolios of Evidence (POEs) were submitted for external moderation.

Umalusi adopted an on-site moderation approach for external moderation of the SBA portfolios. External moderators for these two learning areas were deployed to the BAA moderation venue on 24 and 25 June 2017. Umalusi assigned one external moderator per learning area to conduct the external moderation of the 2017 June GETC: ABET Level 4 SBA portfolios. The external moderators sampled seven student portfolios for Communication in English and 14 portfolios for Mathematical Literacy from five different sites. Information on sites and the number of portfolios is indicated in Table 2A below.

Table 2A: SBA Portfolio Sample

| Criteria | Number of Moderated Portfolios per Site | | | |
|--------------------------|---|-----------------------|--|--|
| | Communication in English | Mathematical Literacy | | |
| Modikwa Platinum Mines | - | 4 | | |
| Woodland | - | 2 | | |
| Coricraft | - | 6 | | |
| Vergenoeg Mining Company | - | 1 | | |
| Coricraft-Navada GP | 1 | 1 | | |
| Coricraft WC | 2 | - | | |
| Gayatri Paper | 1 | - | | |
| Iswepe AET Centre (NTE) | 2 | - | | |
| Tharisa Minerals | 1 | - | | |
| Total | 07 | 14 | | |

The external moderators used the Quality Assurance of Assessment instrument for the moderation of SBA portfolios developed by Umalusi. Internal moderators' reports were also considered during external moderation. The following criteria were used to moderate SBA portfolios:

- Adherence to Subject and Assessment Guidelines (SAG);
- Internal moderation;
- Content coverage;
- Quality of POEs (structure/content);
- · Quality of assessment tasks;
- Student performance; and
- Quality of marking.

SBA portfolios were evaluated based on how the quality indicators of each criterion were met and on the overall impression of the tasks.

2.3 Summary of Findings

The findings summarised below show the overall compliance and the levels of compliance per criterion of the SBA portfolios per sampled site.

2.3.1 Overall Compliance of SBA Portfolios

SBA portfolios are expected to comply in all respects with the set criteria. Portfolios presented by 10 sampled sites for external moderation had 81% overall compliance levels. Table 2B indicates the quantitative analysis and compliance level of the 10 AET sites moderated.

Table 2B: Quantitative Analysis of AET Sites Moderated

| iteria Compliance Frequency (70 Instan | | | tances) | |
|--|------|---------|---------|-----|
| | None | Limited | Most | All |
| Adherence to SAG | 4 | 4 | 2 | 0 |
| Internal Moderation | 0 | 0 | 6 | 4 |
| Content Coverage | 0 | 0 | 0 | 10 |
| Quality of POEs (Structure/Content) | 0 | 3 | 3 | 4 |
| Quality of Assessment Tasks | 0 | 0 | 5 | 5 |
| Student Performance | 0 | 0 | 0 | 10 |
| Quality of Marking | 1 | 1 | 3 | 5 |
| | 5 | 8 | 19 | 38 |
| | 19% | | 81% | |

2.3.2 Compliance of SBA Portfolios per Learning Area

Despite the overall compliance indicated in Table 2A above, the levels of compliance per criteria varied considerably, as shown in Figure 2A and Figure 2B below.

The following comments about the criteria are based on the external moderators' reports after they had verified evidence in the SBA portfolios of the 10 sampled sites during moderation. Compliance refers to satisfying all the requirements (compliance in all respects). The discussion below gives a summary of findings.

Figure 2A below indicates the number of criteria that were met by sites for Communication in English portfolios.

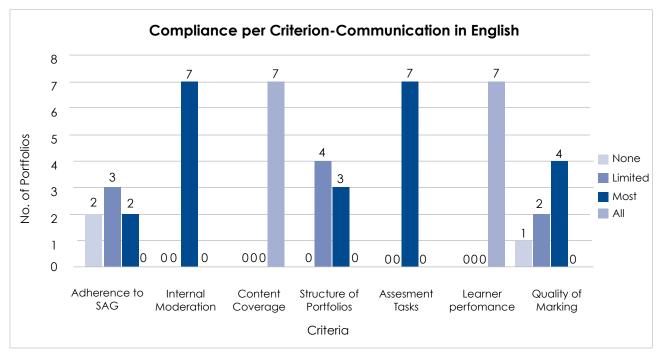


Figure 2A: No. of SBA Portfolios Meeting Criteria at Various Levels $_{\mathbb{Q}}$ of Compliance: Communication in English

In Communication in English, all seven portfolios met all requirements in content coverage and student performance criteria. Most requirements were met with regard to the criteria for adherence to SAG (two portfolios), structure of portfolios (three portfolios) and quality of marking (four portfolios). Two portfolios met none of the quality indicators in adherence to SAG; and one portfolio did not meet the criterion on the quality of marking.

Figure 2B below indicates the number of criteria that were met by SBA portfolios for Mathematical Literacy.

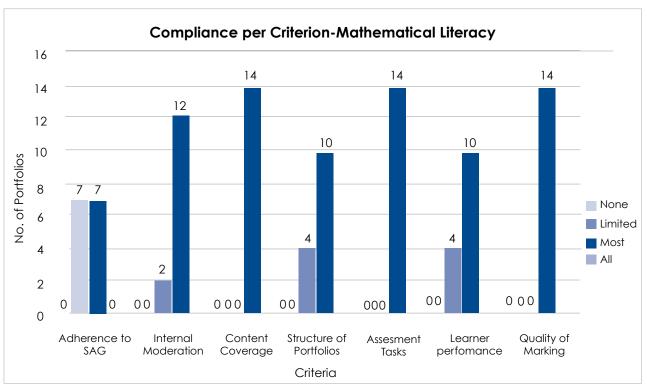


Figure 2B: No. of SBA Portfolios Meeting Criteria at Various Levels of Compliance: Mathematical Literacy

In Mathematical Literacy, all 14 SBA portfolios complied with all the requirements of three criteria: content coverage, assessment tasks and quality of marking. Seven SBA portfolios showed limited compliance with regard to adherence to SAG. None of the 14 portfolios showed non-compliance.

2.3.3 SBA Portfolio Moderation per Criteria

The following comments about the SBA portfolio moderation are based on compliance with each criterion. Compliance refers to satisfying all the requirements (compliance in all respects). The discussion below summarises the findings.

a) Adherence to SAG

From the analysis of data as displayed in Figure 2A above, two sites showed non-compliance with regard to this criterion in Communication in English. Non-compliance was evident at Coricraft-Navada and Gayatri Paper. Limited compliance was also noted at Coricraft-Western Cape and Tharisa Minerals. In Mathematical Literacy, limited compliance was noted at Coricraft-Gauteng and Coricraft-Navada. No SBA portfolios presented contained assessment plans and copies of identity documents.

b) Internal Moderation

Six sites complied in most respects with internal moderation criteria. Only four sites complied in most respects. Four sites complied in all respects in Mathematical Literacy with one site complying in most respects. Compliance in most respects was noticeable in all five sites with regard to Communication in English.

c) Content Coverage

All seven SBA portfolios for Communication in English and all 14 SBA portfolios for Mathematical Literacy were compliant in all respects regarding this criterion. The content was covered as prescribed in the SAG in all 10 sampled sites.

d) Structure of Portfolios

Four out of seven SBA portfolios for Communication in English showed limited compliance and three portfolios were compliant in most respects with this criterion. SBA portfolios for Communication in English at Coricraft-Navada, Coricraft-Western Cape and Tharisa Minerals had limited compliance regarding this criterion. For Mathematical Literacy, 10 SBA portfolios were fully compliant and four were compliant in most respects with this criterion.

e) Quality of Assessment Tasks

All five sites (14 portfolios) complied in all respects with this criterion for Mathematical Literacy. Compliance in all respects was also observed in portfolios for Communication in English in all five sites.

f) Student Performance

SBA portfolios for Communication in English candidates complied fully with this criterion in all five sampled sites. Ten SBA portfolios for Mathematical Literacy candidates complied fully with this criterion. Compliance in most respects was evident in four SBA portfolios. Performance was acceptable, although candidates were unable to respond to all aspects at different levels of difficulty, as set in the task.

g) Quality of Marking

Portfolios for Communication in English from three sites complied in most respects with this criterion. Limited compliance was noted at Coricraft-Western Cape, and Tharisa Minerals did not comply with the requirements for this criterion. A major concern arising from the Communication in English SBA portfolios was inconsistent marking and mark allocation that was not in line with the performance of the candidate. In Mathematical Literacy, the SBA portfolios of all five sites complied in all respects. The quality of marking was accurate, consistent and acceptable.

2.4 Areas of Good Practice

The following areas of good practice were noted:

- BAA provided evidence that the assessment body had monitored the implementation of SBA tasks, and provided feedback to assist sites with quality improvement;
- BAA supplied providers with a self-evaluation instrument to complete and report on the quality of implementation of the SBA tasks.

2.5 Areas of Concern

The following were identified as areas of concern:

- Copies of ID were not included in the POEs;
- · Assessment plans were not included in all POAs; and
- The structure of portfolios for Communication in English was a concern.

2.6 Directives for Compliance and Improvement

The BAA is required to:

• Ensure that portfolios submitted for external moderation include all the necessary documents.

2.7 Conclusion

This chapter summarised the major findings of the moderation of SBA portfolios for the 2017 June GETC: ABET Level 4 examinations. The report has highlighted areas of good practice, concerns, and directives for compliance that the BAA will need to address to ensure that all portfolios submitted for external moderation are of the required quality and standard.

CHAPTER 3 MONITORING OF WRITING

3.1 Introduction

Umalusi monitors the examinations set for qualifications that are registered on its sub-framework of qualifications and carries out this responsibility across public and private assessment bodies.

Umalusi monitored the 2017 June GETC: ABET Level 4 national external examinations conducted and administered by BAA. This was the first time that BAA had conducted these June examinations.

3.2 Scope and Approach

Benchmark Assessment Agency submitted the profile of the cohort of learners who wrote the June 2017 GETC: ABET Level 4 examinations (Annexure A and B). Out of 86 candidates who wrote Communication in English question paper, 54 were males and only 32 were females. Sixty one percent of candidates came from a manufacturing sector, 16% were from mining industry, 22% from community projects and only 1% came from the construction sector.

Forty-seven candidates wrote Mathematical Literacy in eight centres. Female and male candidates made 45% and 55% respectively. Sixty one percent of the candidates came from a manufacturing sector, 22% came from farming and 16% were from the mining sector.

The GETC ABET Level 4 examinations were monitored in seven of the 20 registered examination centres nationally. BAA administered external examinations in two subjects, Mathematical Literacy and Communication in English. These examinations were administered under controlled conditions, on 13 and 20 June 2017 respectively.

A mixed method approach was adopted for collecting data. The prescribed instrument for monitoring the writing of external examinations was used, including observations and interviews.

Table 3A below provides the names of sampled centres; the number of candidates registered and the numbers of those who wrote, from the provinces monitored.

Table 3A: List of Examination Centres, Subjects and Number of Candidates

| Date | Centre | Subject | No. of Candidates |
|--------------|---------------------------------------|-----------------------------|--------------------------------|
| 13 June 2017 | Coricraft (Gauteng) | Mathematical Literacy L4 | 12 (registered) 9 (wrote) |
| 13 June 2017 | Coricraft (Western Cape) | Mathematical Literacy L4 | 12 (registered) 12 (wrote)) |
| 20 June 2017 | Gaytri Paper Mill (Gauteng) | Communication in English L4 | 5 (registered) 3 (wrote) |
| 20 June 2017 | Coricraft (Gauteng)) | Communication in English L4 | 15 (registered) 15 (wrote) |
| 20 June 2017 | Thuto ke Lefa (Limpopo) | Communication in English L4 | 27 (registered) 5 (wrote)) |
| 20 June 2017 | Vergenoeg Mine Centre (Gauteng) | Communication in English L4 | 6 (registered) 5 (wrote)) |
| 20 June 2017 | NTE Company (Pty) Ltd (Mpumalanga) | Communication in English L4 | 15 (registered) 10 (wrote) |

3.3 Summary of Findings

The summary of findings is presented in line with the critical eight-point criteria as outlined below:

- a) Delivery and storage of examination materials;
- b) Invigilators and their training;
- c) Preparations for writing and examination room;
- d) Time management;
- e) Examination environment;
- f) Writing process;
- g) Packaging and transmission of scripts after writing;
- h) Monitoring by the assessment body.

The findings below provide detailed and consolidated information collected during monitoring.

3.3.1 Delivery and Storage of Examination Material

The question papers were delivered by the BAA to all the centres. The question papers arrived in sealed plastic envelopes. They were stored in lockable cupboards, strong rooms and safes. Six out of seven centres monitored by Umalusi had an alarm system, strong rooms and burglar bars to secure the examination material. Six of the seven centres had 24- hour security guards. The only centre that did not meet these security measures was Thuto ke Lefa.

3.3.1 The Invigilators and their Training

It was found that the criteria used in appointing chief invigilators varied from one centre to another. It was noted that Human Resources managers and centre managers, were appointed chief invigilators across centres. It was discovered that Coricraft centres in Western Cape and Gauteng appointed the providers (owners) as chief invigilators.

The chief invigilators and invigilators were trained by the assessment body (i.e., BAA) and evidence of their appointments was noted. BAA provided all trained chief invigilators with certificates of completion signed by the Chief Executive Officer.

3.3.2 Preparations for Writing and the Examination Rooms

During the conduct of the monitoring, different compliance levels were observed:

- Vergenoeg Mine Centre was the only examination centre that was found to be fully compliant with this criterion;
- Clear direction signage was displayed by four out of seven BAA centres monitored by Umalusi;
- A conducive environment in terms of temperature, adequate light, quietness and sufficient and appropriate furniture was observed at all centres;
- No evidence of unauthorised materials in the examination rooms was found, across centres;
- In two centres, Coricraft Western Cape and NTE Company (Pty) Ltd, there was no display of any information on the board; whereas the other five examination centres displayed limited information; namely start and finishing times;
- Examination files were available at all centres with the necessary documents, including examination manuals, appointment letters and other relevant documents;
- It was reported that at one of the seven centres monitored, candidates had not brought their identity documents. In this case, the verification of candidates was done through admission letters;
- The question papers were opened in the examination rooms by the chief invigilator;
- All the monitored examinations centres were free of candidates with special concessions;
- The candidates were requested to switch off their cell phones and put them in bags. They were then

- allowed in the examination room. However, at two centres, Vergenoeg Mine Centre and Coricraft Western Cape, it was noted that the instruction was not communicated; and
- All the centres monitored adhered to the ratio of 1:30 (invigilator per candidates).

3.3.3 Time Management

Time management in all the centres monitored by Umalusi was adhered to. All centres started at 9:00 and finished at 12:00 except at Thuto ke Lefa centre, which started at 9:30 and finished at 12:30 due to transport challenges. Furthermore, it was noted that the checking of the question paper with the candidates for technical errors was not done by five centres. Coricraft (Gauteng) and Thuto ke Lefa did not give the candidates reading time.

3.3.4 Checking the Immediate Environment

Four out of seven centres monitored by Umalusi were found to be fully compliant with this criterion. It was reported that the invigilators at Coricraft (Gauteng and Western Cape) and NTE Company (Pty) Ltd did not check the immediate environment prior to the start of writing, for any material that could be of assistance to the candidates.

3.3.5 Activities during Writing

The writing phase of the examination was conducted successfully without any disruption at the centres, except for Coricraft in Gauteng where it was found that there were difficulties switching off the company radio. However, the chief invigilator explained that the matter was reported earlier and that technical officers had switched off the lights instead of the radio. It is important to mention that the disturbance was resolved within the first 20 minutes of the writing session.

Thuto ke Lefa, NTE Company (Pty) Ltd, Vergenoeg Mine Centre and Gaytri Paper Mill were fully compliant with this criterion. Coricraft in Gauteng and Western Cape met few of the set criteria. It was reported that chief invigilators and invigilators at Coricraft were negligent, very casual and not vigilant when conducting these examinations.

At all seven centres, candidates signed the attendance registers after receipt of the question papers. There was no erratum experienced on both dates of monitoring and no candidates requested that the invigilator clarify any aspect of the question paper during writing.

In six centres, candidates were not allowed to leave the centre in the last 15 minutes of the scheduled time, but at Coricraft in Gauteng one candidate left the examination room at 11:50, i.e., 10 minutes before the end of the examination. The answer scripts were collected from each candidate as and when they indicated that they had finished writing. Each candidate signed the collection register as evidence of having submitted a script. An invigilator of the same gender accompanied candidates who requested to leave the examination room, to use the toilets.

3.3.6 Packaging and Transmission of Answer Scripts

Scripts were collected from each candidate as and when they indicated to the invigilator that they had finished writing. The centres arranged the seating of candidates according to a seating plan and scripts were checked before candidates left the examination room. Again, it was only Vergenoeg Mine Centre, one out of seven centres monitored by Umalusi that was fully compliant with this criterion.

The examination rooms were used for the counting and packaging of the scripts at all centres. Chief invigilators and invigilators prepared the script packages, while BAA monitors and Umalusi monitors observed the process. The scripts were packed in sequence according to the mark sheet, and sealed in sealable bags provided by BAA.

A courier service collected the scripts on the date and at the time arranged by the assessment body at all centres.

3.3.7 Monitoring by the Assessment Body

The BAA monitor visited six of the seven examination centres monitored by Umalusi. The checklist and the monitor's attendance register were signed.

3.3.8 Examination Irregularities and Incidents

There following irregular incidents were observed by Umalusi:

- There were pockets of evidence that some candidates were writing without having produced identity documents;
- A candidate had earphones on while the examination was in progress;
- Candidates were allowed to keep their bags containing their cell phones next to them while writing the examination;
- The company radio noise caused a disturbance at one centre;
- Late arrivals due to transport problems were noted at one centre; and
- Examinations started and finished outside the normal time at one centre, beginning at 9:30 and finishing at 12:30.

3.4 Areas of Good Practice

The following was noted:

- The storage facilities for the examination material were of a good standard; and
- Benchmark Assessment Agency monitored the writing of examination in 6 out of 7 examination centres.

3.5 Areas of Concern

The following areas of concern were noted:

Table 3B: List of Concerns

| Criteria | Nature of Non-compliance | Examination Centre Implicated |
|---|--|---|
| Preparations for writing and examination room | Lack of signage directing candidates to the examination room | Coricraft - Western Cape, NTE Company ((Pty) Ltd and Gaytri Paper Mill |
| | Lack of Information about the examination in progress dis played on board Lack of proper candidate identification | Coricraft - Gauteng and Western Cape, NTE Company (Pty) Ltd, Gaytri Paper Mill and Thuto ke Lefa. Coricraft - Gauteng and Western Cape, NTE Company (Pty) Ltd, Gaytri Paper Mill and Thuto ke Lefa |
| | Candidates writing with their cell phones nearby | Cayiii apar wiii ana molo ke Lela |

| Criteria | Nature of Non-compliance | Examination Centre Implicated |
|---------------------------------------|--|---|
| Time management | Examination rules not read to candidates | Coricraft - Gauteng |
| | Reading time not observed | Coricraft (Gauteng) and Thuto ke Lefa |
| | Question paper not checked for technical accuracy | Coricraft - Gauteng and Western Cape, NTE |
| | | Company (Pty) Ltd and Thuto ke Lefa |
| Checking of the immediate environment | Invigilators did not check for any material that could be used by candidates | Coricraft - Western Cape and NTE Company (Pty) Ltd |
| Activities during writing | Invigilator not vigilant. | Coricraft - Gauteng and Western Cape |
| | Candidate was allowed to leave the examination room 10 minute before the finishing time. | Coricraft - Gauteng |
| | Candidates were writing without ID documents. | Coricraft - Gauteng |
| | A candidate had his earphones on during writing. | Coricraft - Gauteng |
| | Candidates were allowed to keep their bags with their cell phones next to them. | Coricraft - Gauteng and Western Cape |
| | • The radio was on during the first 20 minutes of the writing session. | Coricraft - Gauteng |
| | Late arrival due to transport problems. | Thuto ke Lefa |
| | Examination started at 9:30 and finished at 12:30 | Thuto ke Lefa |

3.6 Directives for Compliance and Improvement

BAA must act on the following directives for compliance:

- Examination centres must display examination-related information for the day on the board;
- Admission of candidates into the examination room must be through checking of their identity documents and admission letters;
- The stipulated reading time must be provided to candidates;
- Chiefinvigilators and invigilators must verify the technical accuracy of question papers with candidates once the question papers have been distributed;
- Chief invigilator and invigilator must be vigilant at all times and carry out their duties as required;
 and
- Candidates must not be allowed to leave the examination room in the last 15 minutes of an examination.

3.7 Conclusion

Despite pockets of non-compliance noted at some of the examination centres, there were no incident that could pose a threat to the integrity and credibility of the conduct and management of the 2017 June GETC: ABET Level 4 examinations administered by BAA.

CHAPTER 4 MONITORING OF THE MARKING

4.1 Introduction

Umalusi monitored the marking processes conducted by BAA for the 2017 June GETC: ABET Level 4 examinations. The marking was conducted in two subjects, Communication in English and Mathematical Literacy.

4.2. Scope and Approach

The marking of the 2017 June GETC: ABET Level 4 examinations was conducted at the BAA head office, where all scripts were marked. Umalusi monitored the marking centre on 1 July 2017. The monitor was required to complete the prescribed monitoring instrument for monitoring of marking through observations as well as interviews with the marking centre manager. The monitor also verified documents available at the marking centre. The number of scripts marked per learning area is indicated in the table below.

Table 4.1 Number of Scripts and Markers per Learning Area

| Marking Centre | Date | | | Number of Markers |
|-----------------------------------|-------------|--------------------------|----|----------------------|
| BAA Head Office 5 Wessels Road | 1 July 2017 | Communication in English | 58 | 4 |
| Rivonia Johannesburg | | Mathematical Literacy | 39 | 3 |

4.3 Summary of Findings

4.3.1 Planning for Marking

The section presents the findings in accordance with the criteria set out in the instrument for monitoring the marking.

The marking process was conducted according to marking instructions developed by BAA. It was noted that the planning for marking was remarkable.

The marking centre manager had an overall examination monitoring plan and specific marking plans, which were implemented. Marking was scheduled for two days, on 1 and 2 July 2017. The management team and all marking personnel reported for duty on 1 July 2017. The marking guidelines, kept at the BAA head office, were taken to the marking venues on 1 July 2017. The marking proceeded as planned and all marking personnel performed their duties as per the management plan.

4.3.2 Marking Centre

BAA used its head office premises as the marking centre. Two boardrooms were allocated as marking venues for the two GETC: ABET Level 4 examinations, which are NQF Level 1 fundamentals. The environment for marking was most conducive for marking, and the entire facility was well resourced.

It was highlighted that local markers were appointed since there was a small number of scripts. The marking centre operated from 07:00 until 17:30 on the first day and from 07:00 until late on the last day, to allow for completion.

As there was a small number of scripts to be marked, no additional room was required and the two allocated marking venues served also as script control rooms. The scripts remained in the marking rooms for the duration of marking. It was noted that scripts were allowed to be moved only from the marking venues to the data-capturing room. The capturing of marks commenced on 3 July 2017 and was scheduled to take two days. Data-capturing was carried out as planned.

4.3.3 Security

BAA security measures at the marking were acceptable. It was noted that:

- There were two security guards on duty, one at the main gate and one at the front office door;
- The security guard stationed at the main gate controlled access to the marking centre. The cars were not checked and visitors were not registered at the entrance gate. However, a register was available at the reception area of the marking venue;
- The marking centre had an alarm system, a strongroom, a small safe, a burglar door and a fire extinguisher, all of which were in good working condition;
- Script tracking forms were signed by both the issuer and the receiver of scripts, which ensured that all scripts were accounted for during marking;
- The scripts were transported to the marking centre by courier services.

4.3.4 Training of Marking Personnel

The training for all marking personnel, namely the marking centre manager, the chief marker-cum-internal moderator/s, the markers and examination assistants, was conducted by BAA's Quality Assurance Manager on 8 April 2017. The markers received two dummy scripts to mark in preparation for memorandum discussion a week before the marking, and the marking guidelines were received on the day of marking. During the standardisation process the team went through the marking guidelines. The training lasted for three hours, from 09:00 to 12:00. The markers were not subjected to any marking competency test in the subjects they were appointed to mark.

4.3.5 Marking Procedure

It was noted that everyone entering the marking premises, including the marking personnel and monitors, signed the registers on arrival at the marking centre. The registers were monitored by the centre manager. Furthermore, a declaration form was completed and signed by all markers.

BAA presented clear marking procedures to its marking teams. The markers adopted a whole script marking approach. Markers were only allowed to change the marking guidelines during the marking guideline discussions and with the approval of the external moderator.

In cases where a candidate answered both optional questions in a question paper, the first answer was considered. The examination assistants checked the scripts to ensure that marks were allocated correctly. A template was used to verify the capturing of marks per section by the marker, and this was later verified by the examination assistants. Chief markers, who were also internal moderators, supervised marking throughout the marking process.

4.3.6 Monitoring of Marking

The chief markers monitored the performance of the markers through the chief marker's report. Criteria included identification and reporting of irregularities, completion of mark sheets, mark allocation, adherence to marking guidelines and the rate of marking.

The protocol and procedure allowed for the chief marker and internal moderator to identify underperforming markers through the marker's report. It also made provision for intervention, wherein such markers would be supported through retraining.

4.3.7 Handling of Irregularities

The management of irregularities was a key focus area and BAA was found to be strict in this regard. The chief marker trained all the markers on what constituted an irregularity and the procedures to be followed

when an irregularity was detected. The procedure manual was available to the monitor as evidence. BAA had in place an Irregularity Committee comprised of the Chief Executive Officer, the Quality Assurance Manager and the Logistics Manager. According to the procedure document studied by the monitor, irregularities were to be reported to the Irregularity Committee once an irregularity was detected, and allowed for due process to be followed.

There were no registered and reported irregularities at the time Umalusi monitored the marking processes.

4.3.8 Quality Assurance Procedures

A BAA official explained the quality assurance procedure that was followed. The evidence provided confirmed that the quality assurance procedures were in place at the marking venues.

It was further observed that the examination assistants and the chief markers checked mark sheets and conducted the verification process. The examination assistants checked whole scripts to ensure that the entire script was marked; that each question had a total; marks were captured per sub-question/item, subtotals and totals; that final totals were correct; and that the transfer of marks to the cover was correct. Marks were captured in a data-capturing room at the BAA head office.

4.3.9 Reports

In line with the BAA procedure manual, the chief markers completed qualitative reports through inputs from markers' reports and submitted these to the centre manager. There were standardised templates for submitting various reports developed by BAA. The centre manager ensured that reports were collected from chief markers. Remuneration for each person responsible for submitting reports was made only when the reports had been received. The assessment body generated the reports, and these were sent to examination centres for feedback.

The BAA management monitored the marking process closely.

4.4 Areas of Good Practice

A number of areas of good practice were noted during monitoring:

- The conducive marking environment at the marking centre;
- The marking centre complied with almost all criteria.

4.5 Areas of Concern

The following was noted as an area of concern:

 The security at the gate and main entrance to the BAA facility was not strict or consistent, as vehicle search and an entrance access register were neglected.

4.6 Directives for Compliance and Improvement

BAA must act on the following directive for compliance:

• Stringent and consistent security measures at the main entrance into BAA must be developed.

4.7 Conclusion

The BAA marking processes were managed in accordance with the management plan developed for marking. There was a notable improvement since the previous examination cycle in the management of scripts.

CHAPTER 5 MONITORING OF THE MARKING GUIDELINE DISCUSSIONS

5.1 Introduction

The quality assurance of marking is comprised of two processes, namely the approval of the final marking guidelines at the marking guidelines discussions, and the verification of marking. Umalusi engages in its annual quality assurance of marking exercise in preparation for the marking processes to ensure that markers maintain appropriate standards and uphold marking quality.

Although the marking guidelines were presented together with the question papers during the moderation process, it was necessary for marking guidelines to be discussed with the marking personnel to ensure that:

- All amendments were agreed upon after deliberation; and
- External moderators approved amendments.

5.2 Scope and Approach

The marking guideline discussions for the 2017June GETC: ABET Level 4 examinations took place on 1 July 2017 at the BAA offices in Rivonia. The internal moderators, chief markers and markers for Communication in English and Mathematical Literacy were actively involved in these discussions. During these meetings, responses to questions in the marking guidelines for the learning areas were rigorously discussed to establish their correctness and to check for other relevant, acceptable, alternative answers.

External moderators used Umalusi's instrument for monitoring the marking guideline discussion to assess the quality of the meetings. Monitoring was based on criteria that are clustered into the following six key areas:

- Attendance of internal moderators, chief markers and markers;
- Verification of question papers;
- Preparations for marking guideline discussions;
- Marking guideline discussion process;
- · Sample marking; and
- Approval of amendments to marking guideline.

Umalusi's external moderators attended the marking guideline discussions to monitor the proceedings, guide where needed, take final decisions and approve the final marking guidelines to be used during marking.

5.3 Summary of Findings

This section summarises the findings and observations of Umalusi's moderators of the proceedings during the marking guideline discussions. The criteria, as outlined in the instrument, are considered important to determine the levels of compliance at the meetings with respect to attendance, refinement of the marking guidelines, the quality of training and the final, approved marking guidelines.

The processes, procedures and measures used by Umalusi to gauge the success of marking guideline discussions relate to attendance, preparations and the rigour with which the marking guidelines discussions are conducted. The findings below are based on the six criteria in 5.2 above.

5.3.1 Attendance of Internal Moderators, Chief Markers and Markers

The chief marker, internal moderator and markers attended the marking guideline discussions in each learning area. The chief markers chaired the meetings in both Communication in English and Mathematical Literacy.

5.3.2 Verification of Question Papers

The question papers and marking guidelines in both Communication in English and Mathematical Literacy were confirmed as the final versions that had been approved during the moderation process.

5.3.3 Preparations for Marking Guideline Discussions

BAA provided their markers with question papers days before they attended the marking guideline discussions. Markers were required to have familiarised themselves with the question paper and developed their own marking guideline in preparation for the meeting. This practice was the same for both Communication in English and Mathematical Literacy.

In both Communication in English and Mathematical Literacy, the chief marker, internal moderator and markers marked two dummy scripts each before the marking guideline discussions on 1 July 2017. They also marked another set of two dummy scripts after the marking guideline discussions. This was part of the training of markers.

5.3.4 Marking Guideline Discussions Process

The centre manager addressed the marking teams. The expectations, principles, procedures and processes governing the marking guideline discussions, approval of the final marking guideline, and the application of the approved marking guideline during the marking process were outlined. The importance of maintaining validity and reliability, together with the value of constant monitoring of the marking teams were emphasised.

The chief marker chaired the marking guideline discussion for Mathematical Literacy. The session was devoted entirely to critical discussion of the marking guideline in terms of mathematically correct responses, acceptable alternative responses, standardisation and refinement of the marking guideline to facilitate consistent and efficient marking of scripts at the marking centre. As the response to each subquestion was discussed and changed through consensus, the internal moderator simultaneously updated the electronic copy of the marking guideline.

Table 5A indicates amendments that were made to the marking guideline during the discussion on the Mathematical Literacy question paper.

Table 5A: Changes Made to the Marking Guideline during Discussions

| No. | Question | Changes effected to the marking guideline | Mark allocation | Percentage |
|-----|----------|--|--------------------|------------|
| 1 | 2.1 | Candidates who used calculators should be credited | 2 | 2% |
| 2 | 6.1 | A candidate may come up with different heading | 1 | 1% |
| 3 | 11.4 | Numbers should start from 0 to 1 | 1 | 1% |

The changes to the marking guideline did not influence cognitive levels of responses required, since the focus was on providing alternative responses. The Umalusi external moderator ensured that additional solutions were correctly reflected in the marking guideline. The marking guideline that resulted from the discussions was correct, unambiguous and could be used effectively by all markers.

Markers were asked to make comments on the marking guideline. Each member of the marking panel was asked to read a section of the question paper. The response to the question was provided from the marking guideline. This was then double-checked with the response that had been given in the pre-marked dummy scripts. If new alternatives were found, these were discussed to test acceptability. If acceptable, they were added as options. Very few such additions were made.

Table 5B indicates amendments that were made to the marking guideline during the discussion on the Communication in English question paper.

Table 5B: Changes Made to the Communication in English Marking Guideline

| No. | Question | Changes effected to the marking guideline | Mark allocation | Percentage |
|-----|----------|---|--------------------|------------|
| 1 | 2.2 | The word "label" was added as an option to the answers because it fitted the explanation of the word "brand" | 2 | 2% |
| 2 | 3.2 | The statement, "they don't answer calls" was added because it also answers the question, which wants an explanation of "can't locate the company" | 2 | 2% |

These additions rendered the marking guidelines more judicious and appropriate. The additions did not affect the cognitive levels of the answers; they merely augmented the responses that were already provided.

5.3.5 Sample Marking

After the marking guideline was provisionally finalised each participant, using the amended marking guideline, marked two dummy scripts. This served as training for the marking team and helped to test the marking guideline. The discussion by the participants after marking dummy scripts helped to refine and finalise the marking guideline. Alternative solutions proposed by participants were critically debated and accepted with appropriate justification. The Umalusi moderator clarified the principle of Consistent Accuracy (CA) marking, a strategy that ensures candidates are not penalised twice. Training was provided to the markers during the sample marking.

Markers were given dummy scripts to mark before the marking guideline discussion in Communication in English. After the deliberations, all three markers were given another dummy script to mark. This was followed by discussions to resolve any discrepancies that might arise, especially in marking creative writing sections.

No further changes or adjustments were made to the marking guideline after the sample marking.

5.3.6 Approval of Amendments to Marking Guidelines

The training process revealed that the marking guidelines were accurate, fair and consistent. It served as the basis for a marking process with integrity. External moderators approved the marking guidelines after they were satisfied that the marking guideline discussions had been conducted correctly and that all amendments were justifiable.

5.4 Areas of Good Practice

The following areas of good practice were noted:

- BAA provided the marking teams with question papers a week before the marking guideline discussions;
- Amendments made in the marking guidelines did not affect the cognitive demand and level of difficulty of question papers;

- BAA used two dummy scripts, before and after the marking guideline discussions, to train markers; and
- No further amendments were made to the marking guidelines after final approval.

5.5 Areas of Concern

There were no areas of concern identified,

5.6 Directives for Compliance and Improvement

There were no directives for compliance and improvement required.

5.7 Conclusion

All participants in the marking guideline discussions for the two learning areas contributed meaningfully to the refinement of the marking guidelines. The marking guideline discussions were generally successful.

CHAPTER 6 VERIFICATION OF MARKING

6.1 Introduction

Verification of marking is the quality assurance process conducted by Umalusi to ascertain that marking has been conducted fairly; and that marking guidelines have been applied consistently in all learning areas. The verification of marking evaluates adherence to the marking guidelines approved by Umalusi during marking guideline discussion meetings.

6.2 Scope and Approach

Umalusi deployed external moderators to conduct on-site verification of marking for Communication in English and Mathematical Literacy. This process was conducted at the Benchmark Assessment Agency (BAA) marking centre on 1 July 2017. The advantage of on-site verification of marking was that external moderators selected their own samples that were representative of different achievement levels. Another advantage was that the findings by Umalusi's moderators are implemented immediately, since the marking was still under way.

The external moderators used the quality assurance of assessment instrument for the verification of marking developed by Umalusi. The following criteria were applied:

- Adherence to marking guidelines;
- Quality and standard of marking;
- Irregularities;
- Performance of candidates; and
- Findings and suggestions.

Each criterion has a number of quality indicators to assist in verifying whether a criterion is met during marking. External moderators also checked candidates' scripts for possible irregularities.

Table 6A below indicates the number of scripts sampled for the verification of marking per learning area.

Table 6A: Scripts Sampled for Verification of Marking

| Learning Area | No. of Sampled Scripts |
|--------------------------|------------------------|
| Communication in English | 20 |
| Mathematical Literacy | 20 |
| Total | 40 |

6.3 Summary of Findings

Umalusi assigned one external moderator per learning area to conduct the verification of marking for the 2017 June GETC: ABET Level 4 examinations at the BAA marking centre. The findings on how the marking in the two learning areas satisfied the criteria are discussed in this section.

During this process the external moderators also checked for evidence of unauthorised alterations or additions to the marking guidelines.

A general discussion on the performance of candidates is also provided in this chapter.

6.3.1 Adherence to the Marking Guidelines

Evidence showed that, generally, the markers adhered to the marking guidelines approved during marking guideline discussions. Adherence to the marking guidelines for Communication in English and Mathematical Literacy is discussed below:

a) Communication in English

The markers have, largely, adhered to the marking guideline. Only in some few instances they deviated. This deviation has, however not created major huge differences in the marks that they allocated and the ones that the external moderator allocated after verification.

b) Mathematical Literacy

The external moderator found that marking was done consistently according to the approved marking guideline. All amendments made during the marking guideline discussions were implemented during marking. Any error and/or additions that were identified during marking were presented to the external moderator. The proposed amendments were thoroughly checked by the internal and external moderators before a decision was taken whether to approve them or not.

6.3.2 Quality and Standard of Marking

Markers were generally consistent and accurate in the allocation of marks, except in a few minor cases. It was evident from the scripts verified on-site that markers were adequately trained and could apply the marking guidelines.

Internal moderation was found to be of good quality across the selected learning areas. External moderators verified by moderating a sample of 20 marked scripts. In their samples, external moderators also included a number of scripts that were not moderated. The variance between the markers' mark and that of the internal moderators was within the tolerance range, with a difference of not more than two marks

As indicated below, the marking process in both learning areas was found to be fair, reliable and valid.

a) Communication in English

Marking was largely consistent. Only in two of the twenty scripts verified did the markers allocate marks incorrectly, this happened in the scripts of two candidates. The candidates were allocated two instead of the four marks that the marking guidelines allocated for a correct response.

The moderation was of a high standard. There were very few instances where the marker and the moderator differed in the marks allocated. This happened mostly in the marking of section C, which contained an element of subjectivity in how a candidate's writing was interpreted.

b) Mathematical Literacy

Umalusi found evidence of good quality marking and moderation in the sample verified. Markers were consistent in the allocation of marks. The addition and transfer of marks were accurate and correct. The examiner and internal moderator both moderated the marked scripts and Umalusi moderated all scripts so moderated.

There were no errors found in the addition or the transfer of marks in the moderated sample.

6.3.3 Irregularities

The following comments about irregularities are based on entire scripts marked in both learning areas, including those that did not form part of the samples verified by external moderators. Markers had been trained to identify possible irregularities and how to handle them. As noted below, in the summary of findings in each learning area there were no or no serious, irregularities found.

a) Communication in English

There were no irregularities identified during marking and verification of marking in this learning area.

b) Mathematical Literacy

There were no serious irregularities identified during marking and verification of marking in this learning area.

6.3.4 Candidate Performance

Available evidence for both Communication in English and Mathematical Literacy showed that, from the scripts verified, candidates were not disadvantaged in the marking of scripts. The findings per learning area are indicated below:

a) Communication in English

The candidates did well in section B, followed by section A and by section C. This is a reflection of the general trend in candidate performance in Communication in English. They generally struggled with section C. They did generally well in the language questions of both sections A and B. Sixteen out of 20 candidates whose scripts were moderated obtained more than 40%, which is a minimum pass for the examination. The best-performing candidate obtained 80% and the lowest mark obtained was 27%. Two candidates received marks between 70% and 79%. Average performance for section A was 54%, section B, 57%, and section C, 49%. Only two candidates fared poorly in section B.

b) Mathematical Literacy

Candidate performance ranged from poor to satisfactory, with the bulk of candidates scoring between 07% and 54%. This is based on 20 scripts sampled for the verification of marking.

Most candidates did not perform well in section A, which related to number operations and relationship. The average performance in this section was 12%. It appears that most candidates struggled with question 1.2, which required application of the knowledge of BODMAS. Question 3 was also a challenge for many candidates. This question was contextualised, that is, drawing from candidates' everyday context. It required that the candidates read and understood the context in order to generate responses correctly. It appeared that most candidates struggled to understand and/or interpret the question. Most seemed to lack understanding of the concepts of percentage and volume.

The average performance of candidates in section B was 28%. This question related to describing, interpreting, pattern representation, function and algebra in different contexts. In this section, candidates seem to have done well in question 4, which required simply filling in the missing numbers of a pattern. However, they struggled with contextualised problems that required an understanding of the context. Candidates were unable to interpret the information given in the table to represent it graphically.

In addition, most candidates did not perform well in section B, which was about representing and describing objects in terms of shape, space and measurement; and the use of maps to access and communicate information concerning routes, locations and directions. Although candidates were provided with formulae, they struggled with understanding the following concepts: area of a triangle, perimeter of an irregular shape, and volume of a cylinder.

Although not satisfactory, the section in which candidate performance improved was section D, relating to data handling and probability. The average performance in this section was 33%.

Only four out of 20 scripts verified obtained a mark of 40% (the pass mark) and above. Sixteen candidates failed the examination.

6.4 Areas of Good Practice

The following areas of good practice were noted:

- There were no irregularities identified in Communication in English and Mathematical Literacy during the verification of marking; and
- BAA separated moderation of SBA from marking days, which allowed more time to train markers.

6.5 Areas of Concern

• None

6.6 Directives for Compliance and Improvement

• None

6.7 Conclusion

This chapter summarised the findings of the verification of marking for the 2017 June GETC-ABET Level 4 examinations. There was evidence that marking was conducted in a fair, credible and consistent manner. Markers adhered to the marking guidelines for both learning areas and there were very few deviations. This is an improvement and BAA deserves to be commended.

CHAPTER 7 STANDARDISATION AND VERIFICATION OF RESULTS

7.1 Introduction

Standardisation is a statistical moderation process used to mitigate the effects on performance of factors other than candidates' ability and knowledge. The standardisation of examination results is necessary in order to reduce the variability of marks from year to year. The sources of variability may occur as a result of the standard of question papers, as well as the quality of marking. Thus standardisation ensures that we deliver a relatively constant product to the market.

According to the GENFETQA Act (Act No. 58 of 2001), as amended in 2008, Section 17A (4), the Council may adjust raw marks during the standardisation process.

Standardisation involves various processes to ensure that the procedure is carried out accurately and involves mainly the verification of subject structures and electronic data booklets, development norms and approval of adjustments.

7.2 Scope and Approach

The BAA presented two learning areas for the statistical moderation of the 2017 June GETC: ABET Level 4 examination, a qualification at Level 1 on the NQF. Umalusi did not conduct the verification of the capturing of marks at the BAA head office.

In carrying out the statistical moderation process consideration was given to qualitative inputs from external and internal moderators and the principles of standardisation.

7.3 Standardisation and Resulting

7.3.1 Development of Historical Averages

BAA developed the historical average from the previous December GETC: ABET L4 examination since this was the first BAA June GETC: ABET L4 examination. BAA submitted the historical averages and these were processed, verified and approved at first submission. There were no outliers identified.

7.3.2 Capturing of Marks

Umalusi did not conduct the verification of capturing of marks for the 2017June GETC: ABET L4 June examination.

7.3.3 Electronic Data Sets and Standardisation Booklets

BAA submitted electronic data sets for verification and approval before the printing of the final standardisation booklets. The standardisation data sets were approved at first submission. Umalusi verified and approved the statistics distribution, raw mark distribution and the graphs per subject, paying particular attention to different colours and raw mark adjustments, as well as the pair's analysis after the 3rd moderation.

7.3.4 Pre-Standardisation and Standardisation

The Assessment Standards Committee (ASC) took into consideration the external moderators' reports, as well as the standardisation principles, in determining the adjustments per subject. The decisions of the ASC relied heavily on BAA's previous October examination, since this was the first BAA June examination. A drop in candidate numbers was also noted in both subjects, compared to the history from the October examination.

7.3.5 Standardisation Decisions

The decisions for BAA's June 2017 GETC: ABET Level 4 examinations were as follows:

Table 7A: Standardisation Decisions for GETC: ABET Level 4

| Description | Total |
|--|-------|
| Number of learning areas presented for standardisation | 2 |
| Raw marks | 2 |
| Number of learning areas standardised: | 2 |

7.3.6 Post-Standardisation

This process has still to be completed.

7. 4 Areas of Good Practice

The following were identified as good practice:

- The approval of the historical average on first submission was highly commendable; and
- The BAA presented directive-compliant booklets.

7. 5 Areas of Concern

The following concern was noted:

• The performance of the candidates in Mathematical Literacy was worrisome.

7. 6 Directives for Compliance and Improvement

• None

7.7 Conclusion

The BAA complied with the requirements for the standardisation of results.

ANNEXURES

Annexure A

Cohort Profile - June 2017

1. GENERAL INFORMATION

Learning Area 1: Communication in English

| Provider | Centre Name | Centre No. | Industry/ Occupation | Duration of Training | Type FT/PT | F | M | Total | Age Range |
|---|---|------------|---------------------------------------|----------------------|---------------|----|----|-------|--------------|
| Numeracy Academy | Coricraft Western Cape | 111613 | Manufacturing /Furniture | 12 months | PT | 6 | 7 | 13 | 35-56 |
| Numeracy Academy | Coricraft Gauteng | 111612 | Manufacturing /Furniture | 12 months | PT | 6 | 4 | 10 | 24-40 |
| Numeracy Academy | Gayatri Paper | 111615 | Manufacturing /Paper | 12 months | PT | 3 | 2 | 5 | 33-47 |
| Numeracy Academy | Bravo (Navada) – Sleep Products | 111634 | Manufacturing /Bedding Products | 12 months | PT | 0 | 9 | 9 | 25-45 |
| Numeracy Academy | NTE | 111619 | Manufacturing /Chemicals | 12 months | PT | 9 | 6 | 15 | 26-58 |
| Thutokelefa Training and Develop- ment | Makg- wabe Communi- ty Projects | 111630 | Community Project | 9 months | FT | 0 | 7 | 7 | 22-44 |
| Thutokelefa Training and Develop- ment | Mammati wa tsie | 111631 | Community Project | 9 months | FT | 0 | 9 | 9 | 22-49 |
| Thutokelefa Training and Develop- ment | Mapue Garden and Poultry Project | 111632 | Community Project | 9 months | FT | 0 | 3 | 3 | 44-70 |
| Media Works | Modikwa Platinum Mine | 111633 | Mining | 9 months | PT | 2 | 4 | 6 | 21-32 |
| Media Works | Tharisa Minerals | 111635 | Mining | 12 months | PT | 1 | 2 | 3 | 23-27 |
| Media Works | Vergenoeg Mine | 111622 | Mining | 12 months | PT | 4 | 1 | 5 | 34-41 |
| Media Works | Waco Kya Sands | 111636 | Construction | 9 months | PT | 1 | 0 | 1 | 36-36 |
| TOTAL | TOTAL | | | | | 32 | 54 | 86 | |

Cohort Profile - June 2017

2. SUMMARY OF INDUSTRY/OCCUPATION DETAILS

Learning Area 1: Communication in English

| Industry/Occupation | F | M | Total | % of Cohort |
|---------------------|-----|-----|-------|-------------|
| Manufacturing | 24 | 28 | 52 | 61 |
| Mining | 7 | 7 | 14 | 16 |
| Construction | 1 | 0 | 1 | 1 |
| Community Project | 0 | 19 | 19 | 22 |
| TOTAL | 32 | 54 | 86 | 100% |
| PERCENTAGE | 37% | 63% | 100% | |

Annexure B

Cohort Profile-June 2017

1. GENERAL INFORMATION

Learning Area 2: <u>Mathematical Literacy</u>

| Provider | Centre Name | Centre No. | Industry/ Occupation | Duration of Training | Type FT/PT | F | M | Total | Age Range |
|---------------------|--|------------|---------------------------------------|-------------------------|---------------|----|----|-------|--------------|
| Numeracy Academy | Coricraft Western Cape | 111613 | Manufacturing /Furniture | 12 months | PT | 6 | 7 | 13 | 35-56 |
| Numeracy Academy | Coricraft Gauteng | 111612 | Manufacturing /Furniture | 12 months | PT | 3 | 1 | 4 | 33-40 |
| Numeracy Academy | Gayatri Paper | 111615 | Manufacturing /Paper | 12 months | PT | 1 | 0 | 1 | 33-33 |
| Numeracy Academy | Bravo (Navada) – Sleep Products | 111634 | Manufacturing /Bedding Products | 12 months | PT | 0 | 9 | 9 | 25-45 |
| Numeracy Academy | NTE | 111619 | Manufacturing /Chemicals | 12 months | PT | 2 | 1 | 3 | 34-45 |
| Media Works | Modikwa Platinum Mine | 111633 | Mining | 9 months | PT | 2 | 6 | 8 | 21-30 |
| Media Works | Vergenoeg Mine | 111622 | Mining | 12 months | PT | 4 | 0 | 4 | 29-58 |
| Media Works | Woodlands Dairy | 111637 | Farming | 9 months | PT | 3 | 2 | 5 | 28-41 |
| TOTAL | 1 | 1 | 1 | | | 21 | 26 | 47 | |

Cohort Profile - June 2017

2. Summary of Industry/Occupation Details

Learning Area 2: <u>Mathematical Literacy</u>

| Industry/Occupation | F | M | Total | % of Cohort |
|---------------------|-----|-----|-------|-------------|
| Manufacturing | 12 | 18 | 30 | 61 |
| Mining | 6 | 6 | 12 | 16 |
| Farming | 3 | 2 | 5 | 22 |
| TOTAL | 3 | 2 | 5 | 22 |
| PERCENTAGE | 45% | 55% | 100% | |

ISBN 978-0-9947107-5-8

Physical Address

37 General Van Ryneveld Street, Persequor Technopark, Pretoria, South Africa, 0020

Postal Address

PO Box 151, Persequor Technopark, Pretoria, 0020

