

Are the National Senior Certificate (NSC) Examinations Predictable? Insights from Economics and Geography (2020–2024)

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Presentation Outline

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Introduction

Umalusi Regulatory and Legislative Framework

NQF Act
No.67 of
2008, as
amended

- Quality Assurance qualifications at levels 1-4.
- National Senior Certificate (NSC) Exit qualification at level 4.

GENFETQA
ACT No.58
of 2001, as
amended.

- Quality assure assessments at exit points.
- **External moderation** of assessment of all assessment bodies and education institutions. Focus is on the **DBE**.

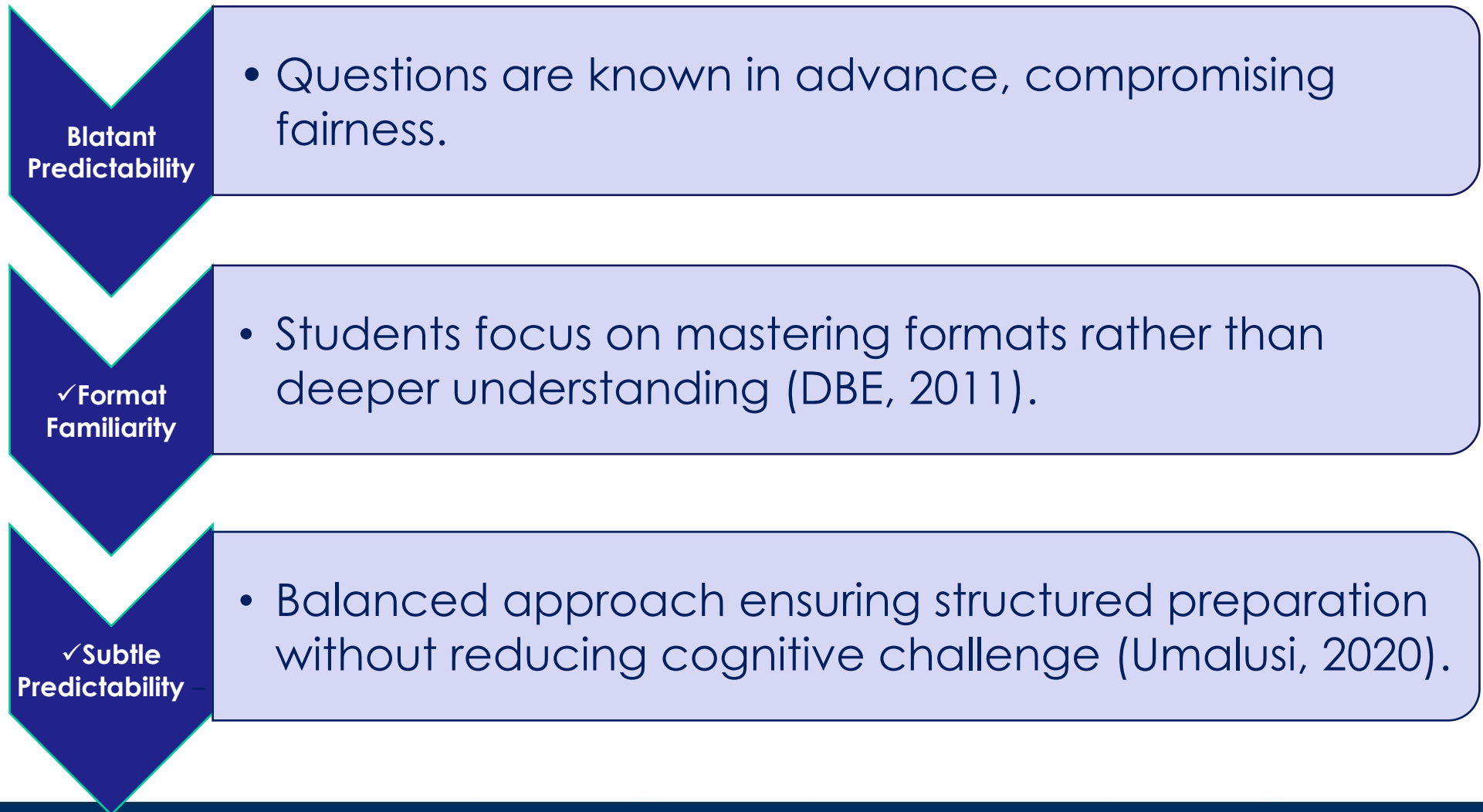
Umalusi Quality Assurance Framework

-Moderation of examination question papers

- SBA, PATs and Orals
- State of Readiness
- Conduct of Exams
- Verification of - Marking
- Concessions & Irregularities
- Standardisation
- Approval of results
- Certification

Clarification of concepts

Three Levels of Predictability (Messick, 1989; Newton, 2007; Stobart, 2009)



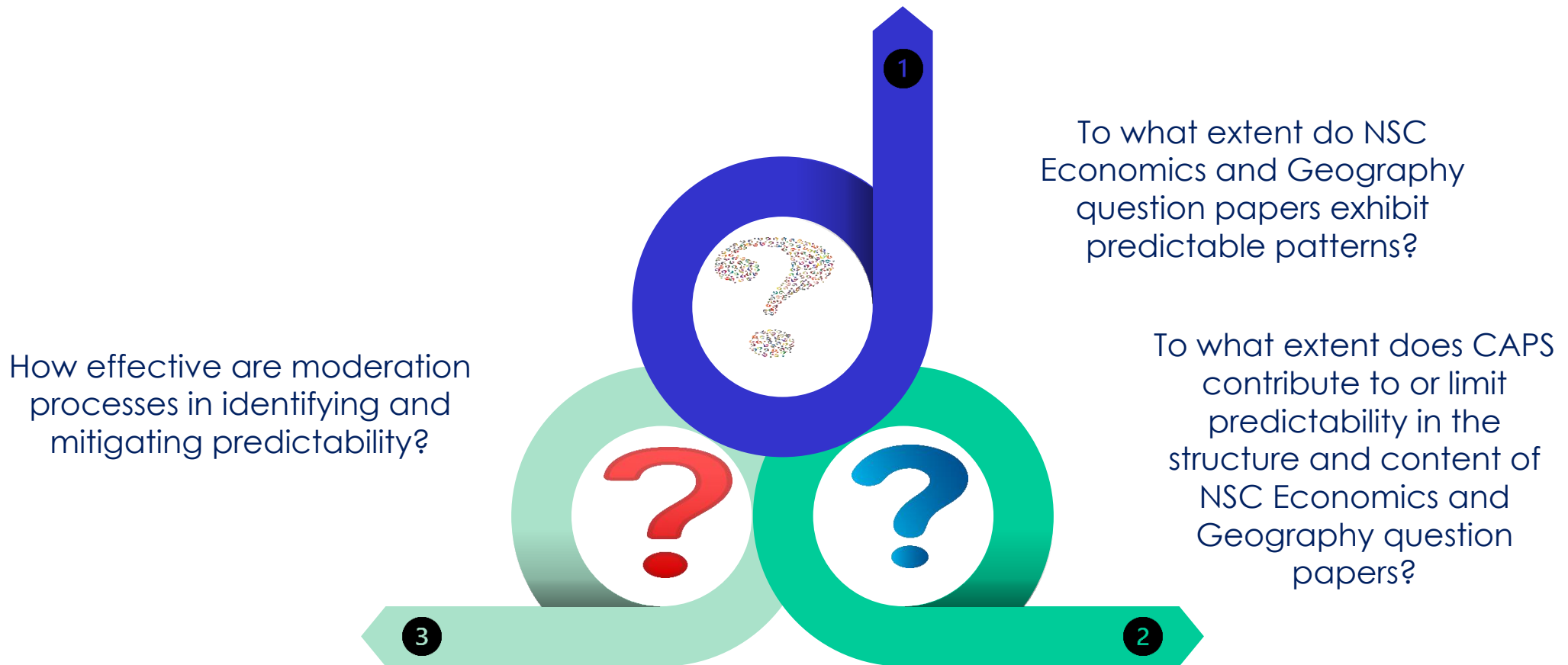
Problem Statement

- Rising performance trends in Economics and Geography raise concerns about factors influencing outcomes, including question paper design.
- Predictable question papers may undermine fairness and limit learners' ability to demonstrate deep understanding.
- If predictability persists, examinations may fail to accurately differentiate between learners' abilities, affecting assessment integrity.
- While moderation aims to ensure quality, its effectiveness in mitigating predictability requires further investigation.
- Ideally, examinations should balance structure and variability to uphold fairness, innovation, and credibility, yet limited research exists on predictability within the South African NSC context.

Purpose of the Research

This study investigates the extent of predictability in NSC Economics and Geography question papers (2020–2024) and its implications for assessment integrity, fairness, and innovation. It also contributes to the literature by providing empirical insights on predictability trends in high-stakes NSC assessments.

Research Questions



Theoretical Framework

Assessment Theory

Construct
Validity
Theory
(Messick,
1989)

Reliability
Theory
(Jensen et al.,
2014)

Fairness in
Assessment
(Byrne & Willis,
2004)

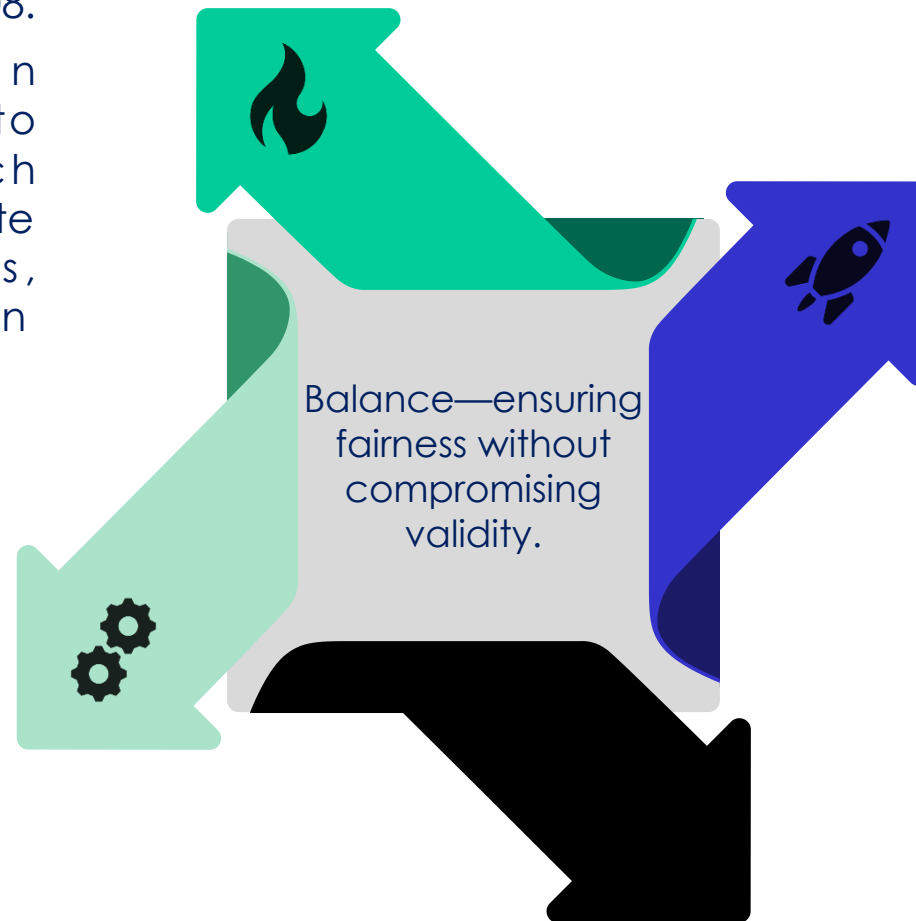
Literature Review

Ofqual, 2008.

Predictability in assessments refers to the extent to which students can anticipate specific questions, topics, or patterns in an examination

Jensen et al., 2014

Overly predictable assessments limit the development of higher-order thinking skills, which are crucial for academic and professional success.



Newton, 2007; Stobart, 2009; Messick, 1989

Excessive predictability can undermine assessment validity by encouraging rote memorization rather than deep learning.

Baird et al., 2016;
Ofqual, 2008

Predictable exam formats can shape both student preparation and teaching practices.

Research Methodology

Research approach and design	Sample	Data Collection	Thematic Data Analysis with 4 themes
<ul style="list-style-type: none">• Qualitative Approach• Case Study Design	<ul style="list-style-type: none">• Purposive Sampling• 2 DBE Examiners,• 3 Internal Moderators,• 4 Umalusi External Moderators	<ul style="list-style-type: none">• Document Analysis• Semi-structured Interviews	<ul style="list-style-type: none">• Content-Based Predictability• Predictability in Question Papers• Moderation and Predictability• Balance of Predictability and Fairness

Findings- Structured Interviews

Structured formats and predictable question types contribute to fairness but also need cognitive variation to prevent surface-level learning.

Balance structured assessments with unpredictability to encourage higher-order thinking skills and prevent students from relying on "spotting" techniques.

Question Types & Format Familiarity

Balancing Predictability & Fairness

Content-Based & Blatant Predictability

Moderation & Subtle Predictability

Curriculum alignment while preventing excessive question repetition, which could lead to rote memorisation.

Moderation practices balance curriculum alignment and fairness, avoiding excessive repetition while maintaining assessment standards.

Findings- Document Analysis

Format Familiarity & Engagement

Geography paper structure influenced candidate engagement, with restructuring improving performance through better content coverage and cognitive alignment.

Assessment Credibility

Examination papers continue to promote fairness and innovation, reinforcing credibility in the NSC assessment system.

04

03

02

01

Predictability & Innovation

Strong predictability compliance (2020–2024) reduced question spotting, upheld integrity, and ensured innovation through external moderation.

Cognitive Demand & Fairness

While 2023 had imbalances in cognitive demand and fairness (notably in Economics P1), 2024 showed improvements in cognitive distribution and question fairness.

Key Findings

- NSC Economics and Geography examinations adhere to structured assessment principles while maintaining fairness and integrity.
- **Predictability exists, but not in a negative way**, as structured formats ensure consistency without compromising validity.
- Blatant predictability—such as direct question repetition—has been mitigated through moderation (Brown & Abrahams, 2023).
- Geography format familiarity influenced engagement, while the 2024 paper restructuring may have improved performance (Smith, 2022; Umalusi, 2024).

Discussion of Findings

Predictability & Construct Validity

Messick (1995) argues that structured assessments enhance fairness and validity. The findings confirm that NSC Economics and Geography maintain cognitive progression without compromising integrity.

Predictability & Higher-Order Thinking

Anderson & Krathwohl (2001) highlight that structured assessments support critical thinking. The study reaffirms that while format consistency benefits candidates, excessive predictability may hinder deeper learning.

Moderation as a Safeguard

Gipps (1994) emphasizes that strong moderation prevents rote memorization. Findings suggest internal and external moderation effectively mitigate excessive predictability while maintaining assessment credibility.

Balancing Structure & Innovation

While some predictability aids fair preparation, international research (Ofqual, 2008; Baird et al., 2016) warns against rigid patterns. The study highlights the need for continuous review to ensure assessments remain robust and adaptive.

Recommendations



1. Enhancing External Moderation to Mitigate Predictability

Research on high-stakes assessment emphasises the role of external moderation in ensuring validity, fairness, and reliability (Newton, 2005; Black & Wiliam, 2018).

Umalusi should strengthen its external moderation framework by incorporating explicit evaluation of predictability levels in question papers and marking guidelines.



2. Implementing a Pre-Writing Phase for Quality Assurance

Assessment validity literature underscores the importance of pre-testing and item validation in maintaining assessment quality (Messick, 1995; Van der Linden & Glas, 2010). ***Umalusi should require pre-writing of question papers by examiners, internal moderators, and external moderators as a quality assurance measure.***



3. Adopting Item Banking to Enhance Quality and Reduce Predictability

International assessment practices highlight the effectiveness of item banks in diversifying assessment instruments and reducing unintended predictability (Haladyna & Rodriguez, 2013). ***By developing and maintaining a secure, curriculum-aligned item bank, Umalusi can ensure a wider pool of vetted questions. This would not only improve quality assurance and cognitive balance but also minimise repetition across examination cycles, thereby safeguarding fairness and integrity.***

Conclusion

- This study aimed to evaluate the extent of predictability in NSC Economics and Geography examinations (2020-2024) and determine whether it compromises assessment integrity.
- By reviewing moderation reports, exam papers, and expert insights, the study sought to establish whether these examinations uphold fairness while providing a structured assessment framework.
- The findings indicate that while a **degree of predictability exists**, it is not detrimental to the validity of the assessments.
- However, the study also found that **blatant predictability**, such as direct question repetition or rigid patterns, has been successfully mitigated through external moderation by Umalusi.
- These insights reinforce the importance of maintaining a **balanced approach**—ensuring that assessments remain structured yet sufficiently varied to uphold fairness, validity, and academic rigor.

THANK YOU

Questions?

