

BQA NCQF Qualification Template

DNCQF.FDMD.GD04

Issue No.: 01

| QUALIFICATION SPECIFICATION | | | | | | | SECTION A |
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| QUALIFICATION DEVELOPER | BA ISAGO University | | | | | | |
| TITLE | Master of Educational Measurement and Evaluation | | | | NCQF LEVEL | 9 | |
| FIELD | Education and Training | SUB-FIELD | Educational Measurement and Evaluation | | | | |
| New qualification | ✓ | Review of existing qualification | | | | | |
| SUB-FRAMEWORK | General Education | | TVET | | Higher Education | ✓ | |
| QUALIFICATION TYPE | Certificate | | Diploma | | Bachelor | | |
| | Bachelor Honours | | Master | ✓ | Doctor | | |
| CREDIT VALUE | 254 | | | | | | |
| RATIONALE AND PURPOSE OF THE QUALIFICATION | | | | | | | |
| <p>In any educational process after teaching, every teacher is required to find out if learning has taken place. Which means teaching is incomplete without testing and it is very essential that testing of learners' achievements allow information to be conveyed and interpreted with less ambiguity. The discipline that measures effectively learning outcomes is in the realm of measurement, assessment and evaluation. Without measurement and evaluation, it is impossible to know whether students are making any progress. A large component of the teacher education qualifications consists of pedagogy, leaving very little time for development of skills in psychometrics, which deals with measurement and evaluation of cognitive abilities in learners (RNPE, 1994; ETSSP, 2015). In order to improve skills in psychometrics, it is necessary to provide opportunities for teachers or educators to advance their profession through advanced specialised qualifications in measurement and evaluation.</p> <p>The Botswana government through the Education & Training Sector Strategic Plan (ETSSP 2015-2020) is in the process of transforming education by modernizing the curriculum into a competency based</p> | | | | | | | |

curriculum that would encourage greater focus on providing more varied and appropriate learning opportunities. The strategy also includes; improving teaching and learning at all levels and undertaking intensive teacher development; developing appropriate assessment patterns through setting up a National Assessment Framework to better organise school-based assessment and measuring skills and linking with national assessment. Activities will be focused on qualitative and substantive diagnosis and effective targeted support of a new curriculum and assessment patterns that will also assess skills development, leadership, management and planning, capacity building, school monitoring, and fostering partnerships.

The ETSSP 2015-2020 prompts the Education and Training sector to advance training on school-based assessment and measuring skills that is linked with national assessment. Recommendations have also been made to improve the quality of graduates and their job readiness and particularly increase postgraduate qualifications across sectors where necessary (HRDC, 2016). The Botswana government through the Vision 2016 and the NDP 11 have similarly prioritised research aspects such as Monitoring & Evaluation as well Analytical and critical analysis. These anticipated skills are embedded in the Master of Education in Measurement and Evaluation qualification that BA ISAGO University has developed. The qualification is also intended to provide specialised assessment skills to teachers, professionals in educational institutions and examining boards in preparing standardised tests or examinations, and to be able to interpret scores of students in a valid and reliable procedure. Measurement and evaluation in general assesses educational goals and purposes, determines the extent to which accepted educational objectives are implemented and enable teachers to know his/her pupils better. Thus this qualification in 'measurement and evaluation' would contribute to the improvement of both instruction and the learning situations. Developing measurement skills among teachers is one of the strategies of minimizing the large margin of error inherent in tests as tools of measuring students' achievement. Testing skills are not only needed by teachers but also by the officers in examining boards, inspectorate and curriculum development officers.

Purpose

The purpose of this qualification is to equip candidates with advanced knowledge, skills and competencies to:

- i. Develop and improve educational assessments in their own settings.
- ii. Implement assessment plans to measure the achievement of students.
- iii. Develop instructional strategies for targeted areas of growth.

- iv. Diagnose the strengths and weaknesses of pupils and develop remedial actions.
- v. Measure student performance patterns and subsequently make informed decisions on instructional aim, units, grades or marks.
- vi. Conduct specialized research in the area of assessment, measurement and evaluation to inform formulation of educational policies.

ENTRY REQUIREMENTS (including access and inclusion)

- i. Candidates should have a bachelor's degree (Honours) (NCQF Level 8) or equivalent in education or related field
- ii. Recognition of Prior Learning (RPL) and Credit Accumulation and Transfer (CAT) will be applicable and considered for access and inclusion in line with relevant ETP and national policies.

QUALIFICATION SPECIFICATION

SECTION B

| GRADUATE PROFILE (LEARNING OUTCOMES) | ASSESSMENT CRITERIA |
|---|--|
| 1. Demonstrate advanced knowledge of systematic application of various concepts of educational measurement to determine critical performance solutions. | 1.1 Apply the methodological and theoretical issues in measurement, assessment and evaluation. 1.2 Justify the purposes of assessment, measurement and evaluation in education. 1.3 Construct both cognitive and affective measurement instruments and assessments 1.4 Design instruments that satisfy the technical requirements of educational and psychological measurement. 1.5 Choose appropriate measures and methods for assessing student learning outcomes. 1.6 Apply measurement techniques to a number of common issues (item and person calibration, performance and judged data, DIF – item bias and DDF, problems with raw scores and rubrics, raters and markers) 1.7 Conduct data analysis and prepare relevant reports on the quality of educational and psychological tests. |

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| | <p>1.8 Advise on various types of tests, items and questions that are appropriate for the intended purpose</p> <p>1.9 Assess the challenges hindering effective usage of psychological tests.</p> |
| 2. Plan for the implementation and evaluation of academic programmes across different education spectrums. | <p>2.1 Develop robust framework/policies for effective monitoring of educational programmes based on a range of evaluation goals and designs.</p> <p>2.2 Collect data systematically to evaluate the effectiveness and efficiency of educational programmes.</p> <p>2.3 Generate reports and communicate the results of program evaluations.</p> <p>2.4 Integrate evaluation activities and results into curriculum development, teaching and learning.</p> <p>2.5 Monitor the impacts of educational programmes, projects and policies on learner experiences.</p> |
| 3. Administer appropriate assessment tools in adherence to best practices, ethical and legal issues involved in the assessment process. | <p>3.1 Justify the purposes, theories, policies and potential uses of formative and summative assessments and the relationship(s) between the two.</p> <p>3.2 Choose assessment methods appropriate for instructional decisions and individual student needs.</p> <p>3.3 Design assessments instruments that are valid, reliable, and appropriate for instructional decisions.</p> <p>3.4 Analyze assessment information carefully and logically from multiple perspectives, using discipline specific methods and develop reasoned solutions to problems.</p> <p>3.5 Interpret assessment results for making decisions about individual students, planning instruction, developing curriculum, and continuous improvement.</p> <p>3.6 Monitor the principal concepts in educational testing to inform policy development and practice in educational assessment.</p> |
| 4. Apply data analysis techniques related to areas such as test theory, item | <p>4.1 Tabulate assessment data using different graphical representations.</p> |

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| response theory, assessment, statistics, factor analysis, and multi-level modeling. | <p>4.2 Apply measures of central tendency; variability; correlation coefficients in data sets.</p> <p>4.3 Analyze using ANCOVA; MANOVA; Regression; Multi-level modelling; non-parametric tests; Sign tests, etc.</p> <p>4.4 Summarize findings and conclusion based on the results to make recommendations.</p> |
| 5. Conduct research on contemporary issues and educational problems in measurement and evaluation from a local and global perspective to guide decision making and policy formulation. | <p>8.1 Monitor the development and changes in the education sector to identify critical areas for research.</p> <p>8.2 Examine the current issues/challenges and problems in measurement and evaluation in an educational context.</p> <p>8.3 Formulate research questions and objectives to guide the research project and assist in the construction of a logical argument.</p> <p>8.4 Gather data through primary and secondary sources.</p> <p>8.5 Apply appropriate technology to conduct analyses of educational data</p> <p>8.6 Utilize statistical and/or mathematical modelling software for data analysis and interpretation of results.</p> <p>8.7 Communicate the findings to appropriate stakeholders.</p> <p>8.8 Propose recommendations to solve problems in educational measurement and evaluation.</p> |

| QUALIFICATION STRUCTURE | | | SECTION C |
|--------------------------------------|--|-------|-----------|
| FUNDAMENTAL COMPONENT | Title | Level | Credits |
| Subjects / Units / Modules / Courses | Fundamentals of Statistics | 9 | 12 |
| | Advanced Methods in Educational Research | 9 | 18 |
| | Foundations of Education (Philosophy, Sociology and Psychology of Education) | 9 | 12 |
| CORE | Introduction to Measurement and Evaluation | 9 | 12 |

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| COMPONENT Subjects / Units / Modules /Courses | Principles of Test Construction | 9 | 12 |
| | Fundamentals of Programme Evaluation | 9 | 12 |
| | Advanced Statistics in Education | 9 | 15 |
| | Constructing of Questionnaires and Rating Scales | 9 | 15 |
| | Current Issues in Educational Measurement and Evaluation | 9 | 12 |
| | Programme Planning and Evaluation | 9 | 15 |
| | Modern Measurement Theory Psychometric Theory | 9 | 15 |
| | Educational Measurement and Assessment Methods | 9 | 12 |
| | Research Project | 9 | 80 |
| ELECTIVE COMPONENT Subjects / Units / Modules /Courses | Choose 2 | | |
| | Observational Techniques in Education | 9 | 12 |
| | Advanced Educational Technology for Testing | 9 | 12 |
| | Monitoring and Evaluation Techniques | 9 | 12 |
| | | | |
| Rules of combinations, Credit distribution (where applicable): | | | |
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| ASSESSMENT AND MODERATION ARRANGEMENTS |
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| <p>ASSESSMENT</p> <p>Formative Assessment</p> <p>The weighting of formative assessment is 60 % of the Final assessment mark.</p> <p>Summative Assessment</p> <p>The weighting of summative assessment is 40 % of the Final assessment mark.</p> <p>MODERATION</p> <ul style="list-style-type: none"> • There shall be internal and external moderation for quality assurance purposes • Assessment and moderation shall be conducted by BQA registered and accredited assessors and moderators. |

- Moderators and assessors should be experts in educational measurement and evaluation or related at level 10 in the sub-field of the qualifications area.

RECOGNITION OF PRIOR LEARNING (if applicable)

There will be provision for awarding of the qualification through RPL mode in line with the national RPL Policy. There will also be provision for CAT awarding credits to the learner in a case where they do not complete the qualification or transfer to another institution.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Learning Pathways

Horizontal Articulation: (NCQF Level 9)

- Master of Educational Leadership and Management
- Master of Educational Research and Evaluation
- Master of Curriculum, Instruction and Evaluation
- Master of Educational Policy and Evaluation

Vertical Articulation: (NCQF Level 10)

- Doctor of Philosophy in Educational Leadership and Management
- Doctor of Philosophy in Educational Research and Evaluation
- Doctor of Philosophy in Curriculum, Instruction and Evaluation
- Doctor of Philosophy in Educational Policy and Evaluation

Employment Pathways

Master of Educational Measurement and Evaluation graduates are in high demand because of their technical skills and trans-disciplinary perspectives. Many are employed as:

- Lecturers
- Data analysts
- Research scientists
- Test developers
- Research consultants
- Assessment and testing specialists

QUALIFICATION AWARD AND CERTIFICATION

Candidates meeting the prescribed requirements will be awarded the Master of Educational Measurement and Evaluation in accordance with the qualification composition rules and applicable policies. Candidates must have successfully completed all fundamental, core and elective modules and attained a minimum of 254 credits.

REGIONAL AND INTERNATIONAL COMPARABILITY

The proposed qualification was benchmarked with the following;

- Master of Science in Educational Assessment ; Oxford University, England
- Master's in Assessment, Testing, and Measurement in Education; George Washington University, United States
- Master of Education in Assessment and Quality Assurance in Education and Training; University of Pretoria South Africa

The proposed is pitched at the same NQF level 9 with the identified regional qualifications. All the recognise assessment as a key component in education and training. Therefore, the qualifications are designed for teachers/educators and practitioners who wish to become more knowledgeable about measurement, evaluation and assessment practices in schools and other formal or informal educational settings.

The proposed qualification follows the same structured followed by the George Washington University and Oxford University, in the sense there are provisions for taught modules and a dissertation. However, the qualification offered by the University of Pretoria follows a different approach where the structure of the qualification is mainly research based. The University of Pretoria also looks further into a much boarder aspect quality assurance in addition to assessment.

The proposed qualifications would run for 2 years, which is similar to Oxford University. On the other hand, University of Pretoria's qualification runs for 1 year, whereas George Washington University run their master's qualification for 15 months.

All the qualifications require and undergraduate degree in Education or related area, for entry and assessment is mainly in the form of assignments and the final dissertation. There are also notable similarities in terms of modules such as assessment practices, design, statistics, evaluation, psychometrics and measurement. The qualifications also include on the contemporary issues, technical and statistical knowledge in assessment and engage with the design and evaluation of educational assessments.

This qualification is well blended in terms of measurement theories, different evaluation techniques, different statistical analysis, monitoring and evaluation of educational programmes and psychometrical analysis (Item Response Theory) which makes the qualification to be very unique. The students will be exposed to different modern measurement theories, construction of valid and reliable tests and adequate research methodology/designs. The qualification would prepare individuals for work in research and assessment organisations in the fields of education, psychology and related human services fields. The qualification places high value on quality of evidence, statistical analysis, assessment and psychometrics as well as the use of research technology in producing evidence to inform policy and practice. This qualification also provide understanding and skills in data collection, management and processing, measurement theory and test construction, survey design, design and execution of randomized controlled experiments and quasi-experiments, assessment strategies and statistical analysis and reporting.

REVIEW PERIOD

This qualification will be reviewed after 5 years upon registration