MINING QUALIFICATIONS AUTHORITY





2024/25 MQA FINAL RESEARCH AGENDA

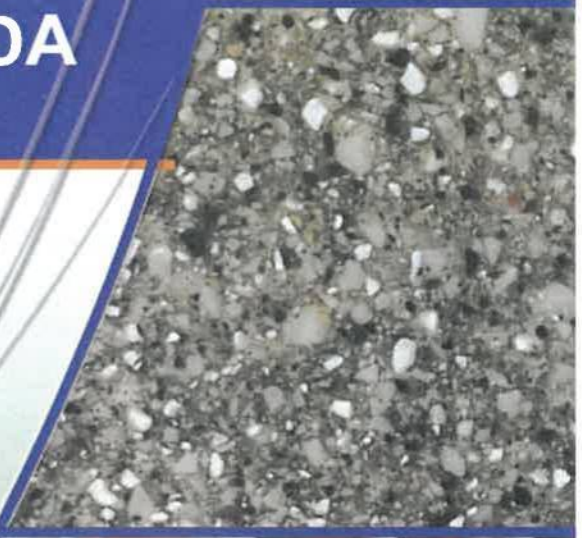




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1. INTRODUCTION

The Mining Qualifications Authority (MQA) was first established under the Mine Health and Safety Act No.29 of 1996 and later registered as a Sector Education and Training Authority under the Skills Development Act No.97 of 1998. To this end, the MQA is Sector Education and Training Authority (SETA) responsible for the administration of skills development programmes for the Mining and Minerals Sector in South Africa

2. STRATEGIC OBJECTIVES

2.1 Promote efficient and effective governance and administration.

2.2 Improve skills development planning and decision –making through research.

2.3 Promote work-based skills development to support transformation in the mining and minerals sector (MMS).

2.4 Facilitate access to occupationally directed learning programmes for the unemployed.

2.5 Support training initiatives in mining communities.

2.6 Ensure the delivery of quality learning programmes in the mining and minerals sector.

3. LEGISLATION GOVERNING THE MQA

The MQA is a statutory entity that has the primary mandate of coordinating skills development processes and programmes in the MMS. The primary objective of the MQA is to support the MMS to continuously develop sufficient and competent workforce in occupations that are related to the MMS.

The MQA operates under a legislative framework that includes three primary legislative instruments, as shown in Table 1:

3.1 Mine Health and Safety Act of 1996

3.2 Skills Development Act of 1998; and

3.3 Mineral and Petroleum Resources Development Act of 2002.

Table 1: The legislative framework within which the MQA operates

The Mine Health and Safety Act, 1996(Act 29 of 1996) Section 41(3)	The Skills Development Amendment Act, 2003(Act 31 of 2003)	Mineral and Petroleum Resources Development Act of 28 of 2002.
Established the MQA in June 1996 to advise the minister of Mineral and Energy (now the Minister of Mineral Resources) on: a) The creation of a framework for qualifications and learning achievements in the mining industry to improve health and safety standards through proper training and education; b) Standards and competency setting, assessment, examinations, quality assurance and accreditation in the mining industry and c) Linking and qualifying framework for the manning industry to the National Qualification Framework referred to in the National Qualifications Framework Act, 67 of 2008	Section 4A of schedule 2 "re-established" the MQA as follows: Despite anything to the contrary in either this Act or the Mine Healthy and Safety Act, 1996 (Act 29 of 1996 and with effect from 20 March 2002, the Mining Qualifications Authority, established in terms of section 9(1) of this Act as SETA 16	Establishes that the Minerals and Mining Development Board must in terms of Section 58(1) of this Act "in consultation with the MQA, ensure the promotion of human resources development in the minerals and mining industry"

The Department of Higher Education and Training (DHET) promulgated the National Skills Development Plan (NSDP) which took effect on 1 April 2020. The plan identified priorities across sectors of the economy with various outcomes to address the skills shortages and gaps. The MQA is guided by the policies of the DHET. Therefore, any policy changes will be incorporated into the operations, programmes, and activities of the MQA as and when the need arises.

4. IMPORTANCE OF RESEARCH

Scientific research is essential for enhancing our understanding of the nature, extent, and state of skill demand and supply in the MMS. Research is necessary to gather labour market intelligence regarding skills requirements and the factors that influence skills development. This information is crucial for improving skills planning and implementing effective skills development interventions. Overall, research primarily focuses on enhancing the quality of life by fostering skill development among the workforce, particularly in the MMS.

Research is a systematic inquiry that encompasses the processes of development, experimentation, and evaluation with the purpose of generating or adding to universally applicable knowledge. The objective is to provide novel perspectives and reach definitive judgements on various subjects pertaining to the enhancement of skills, which are essential from both a legislative and functional standpoint. This involves a comprehensive analysis of a specific topic, with the objective of discovering new perspectives or achieving a more profound understanding.

Comprehensive research is essential in the Post-School Education and Training (PSET) system, as it contributes significantly to realising the goals outlined in the White Paper for PSET. It allows professionals to evaluate and contrast various theories and methods for delivering PSET, as well as advancing cutting-edge information, services, and applications for the system. Therefore, research can offer valuable perspectives on the PSET system and its target groups, as well as the effectiveness of policies and their execution. In essence, research serves a pivotal function in furnishing the MQA with substantiating insights that guide decision-making, policy review, and the enhancement of systems, practices, and services.

5. THE MQA's RESEARCH PRIORITIES

The MQA research agenda sets to outline research projects to be prioritised for the period April 2024 to March 2025. It is informed by the strategic objective 2 outlined in the MQA strategic plan and annual performance plan. The research agenda aims to lead and collaborate on research projects in skills development priorities within the MMS for the purpose of making informed decisions and creating a credible institutional mechanism for skills development planning and research in the sector.

The purpose of the NSDP is to ensure that South Africa has adequate, appropriate and high-quality skills that contribute towards economic growth, employment creation and social development through attainment of eight outcomes. The priorities that stand out in the NSDP for the MMS are as follows:

a) Identify and increase production of occupations in high demand
b) Linking education and workplace
c) Improving the quality of education, skills development and innovation
d) Support the growth of the public college system
e) Skills development for entrepreneurship
f) Support worker-initiated training
g) Support career development service

Each focal area possesses the capacity to generate diverse research topics that address sector-specific challenges. The MQA has identified specific areas of concentration and topics that hold great importance for the MMS, aligning with these areas. In order to achieve this, the MQA forms partnerships with public institutions, such as universities and research institutions, to create a structured system for skill development and planning. To ensure the continual objective decision making and skills development planning; the research projects below are proposed for the 2024/25 financial year.

5.1 Sector Skills Plan 2025/26 (Annual Update) - Legislative Imperative

The focus of the SSP is to identify skills demand and supply issues to inform interventions for the next years

Key focus areas include the:

- The MQA's sector profile including:
  - Identifying the key role players
  - Economic Analysis of the MMS
  - Employer and Labour Market analysis
- Key change drivers of the sector and alignment with national strategies and plans
- Occupational shortages and skills gaps within the MMS
- Current and future sector partnerships
- The MQA's approach to monitoring and evaluation
- Sector priorities in skills development

5.2 WSP-ATR Trends Analysis (2020-2024) - Functional Imperative

The broad theme for this study is the trends and patterns of WSP-ATR submission over the past four years.

Key focus areas include providing a trends analysis of:

- MMS' organisations in terms of geographic location, company size and sub-sector.
- Workforce of the MMS in terms of population groups, gender, employees living with a disability, South African vs. Non- South African citizens and educational levels.
- Hard-to-fill vacancies in terms of province, sub-sector as well as reasons why employers identify them as hard-to-fill.

- Nature skills development in the MMS as reflected in the ATRs.
- Determination of the skills development priorities of organisations in the MMS as reflected in the WSPs.
- Comparative analysis with data submitted in previous years.
- Comparing of the data with other information contained in the MQA's database (where available).

5.3 Exploring the state and nature of the green hydrogen technology in the MMS: Implications for skills development - Functional Imperative

The aim of the study will be to explore the state and nature of the green hydrogen technology in the MMS and its implications for skills development.

Key focus areas include:

- Identifying the green hydrogen technologies implemented in the MMS.
- Establishing the factors impeding the implementation of green hydrogen technologies in the MMS.
- Determining the nature of skills supply in relation to green hydrogen technologies in the MMS.
- Identifying the skills demand associated with green hydrogen technologies in the MMS.
- Exploring international mining-related experiences in the adoption of green hydrogen technology.
- Identifying interventions that can be implemented by the MQA to facilitate skills development in the field of green hydrogen technologies within the MMS.

5.4 The Quest Towards Attaining JET: *Assessing the Implementation of ESG-Related Skills to Determine the Requirements for Skilling and Upskilling of the MMS Workforce* - Functional Imperative

The aim of the study will be to at assess the implementation of ESG-related skills to determine the requirements for skilling and upskilling of the MMS workforce in quest of attaining Just Energy Transition.

Key focus areas include:

- Understanding the state of the adoption ESG principles within the MMS.
- Assessing the skills required to achieve JET.
- Interrogating how existing skills meet the requirements needed for JET in the MMS.
- Analysing the effectiveness of the existing legislative and policy framework for the achievement of JET in the MMS.
- Determining the extent and nature of JET skills supply in the MMS.

- Specifying the potential impact of the adoption of ESG principles on the current workforce.
- Formulating interventions that the MQA can enact to support skills development related to the achievement of JET in the MMS.

5.5 Challenges and opportunities for Small-Scale Mining (SSM) in the South African economy- Functional Imperative

The aim of the study will be to uncover the challenges and opportunities for small-scale mining (SSM) in the South Africa economy.

Key focus areas include:

- Determining the extent of coverage and scope of small-scale mining within the geographical confines of South Africa.
- Examining the economic contribution and employee profile of South African small-scale mines, with a particular emphasis on, but not limited to, contribution to GDP, community development, profiling employees' race, gender, educational attainment, nationality, occupational level, etc.
- Establishing the requirements for the operation of a small-scale mine, specifically focusing on the resources required for its successful functioning.
- Investigating the factors that drive individuals to engage in small-scale mining.
- Identifying and analysing the challenges experienced by small-scale miners.
- Assessing the effectiveness of existing South African legislations and policies in supporting small scale miners.
- Existing opportunities in South Africa that contribute to the growth and sustainability of the small-scale mining.

5.6 A comprehensive review of existing artisan development programmes in the Mining and Mineral Sector. - Functional Imperative

The aim of the study will be to investigate the state of artisan supply and ways of enhancing their competencies in the MMS.

Key focus areas include the:

- Assessing the effectiveness of the existing artisan development programmes in enhancing the skills and capabilities of artisans in the MMS.
- Identifying the Interventions aimed at addressing artisans demand in the MMS.
- Discussing the specific skills and training components are typically included in artisan development programmes in the MMS.
- Exploring the employers' perceptions on the employability of artisans in the MMS.

- Determining where the existing artisan development programmes are aligned with sectoral, and national policies in the MMS.
- Stipulating the international (global and continental) best practices from the mining countries such as (Australia, Ghana, Germany, and Canada)
- Developing the innovative strategies that could be implemented to enhance the competencies of the current cohort of artisans.

5.7 Factors Influencing Workplace Skills Plan-Annual Training Report (WSP-ATR) Submission Rates in the MMS- Functional Imperative

The study will focus on identifying and analysing the factors that influence submission rates of WSP-ATR in the MMS. The aim is to understand the reasons behind compliance or non-compliance among mining companies.

Key focus areas include:

- Analysing the historical WSP-ATR submission trends
    - Identifying significant changes or patterns in submission rates over the five-year period (average submission rates and variations in submission rates across different sub-sectors, company sizes, or locations).
- Finding out the level of awareness and understanding of WSP-ATR requirements and deadlines among companies.
- Assessing the existing consequence management mechanisms (effectiveness of existing penalties and incentives) for ensuring WSP-ATR compliance and meeting of the MQA requirements to access Mandatory Grants.
- Investigating the MMS companies' internal capabilities and resources of companies (e.g., HR function, skills development expertise) and their relationship to submission compliance.
- Delineating the primary reasons cited by mining companies for not submitting WSP-ATRs (perceived administrative burden or resource constraints, perceived benefits or lack of clarity in WSP-ATR purpose, concerns about data confidentiality or potential consequences of submission).
- Assessing the effectiveness of the MQA's current communication and outreach strategies regarding WSP-ATR requirements and perceived complexities pertaining to the submission processes and usability of WSP-ATR systems and templates.
- Assessing the adequacy and effectiveness of support provided to companies for completing WSP-ATRs.
- Crafting creative ways of increasing WSP-ATR submissions.

5.8 Examining the skills levels and knowledge gaps of the existing OHS representatives in the MMS- Functional Imperative

The study will focus on conducting a comprehensive assessment of the existing skills levels and knowledge gaps of OHS representatives in the MMS to identify critical areas for improvement in training and development programs.

Key focus areas include:

- Analysing the content, coverage, and effectiveness of existing OHS training programs for representatives.
- Identifying the currently used assessment tools used across different company sizes, sub-sectors for OHS representatives.
- Comparing the skills and knowledge of OHS representatives with the expected competencies of OHS officers in the MMS, as defined by the Mine, Health and Safety Act 29 of 1996 and industry standards.
    - Identifying any discrepancies between the required competencies for OHS officers and the existing training provided to OHS representatives.
- Investigating the role of training and development programs in equipping OHS representatives with the necessary skills and knowledge.
- Assessing the level of participation and completion rates for OHS training programs among representatives.
- Investigating the factors hindering the successful transition of OHS representatives into officers (impact of factors such as experience, qualifications, job responsibilities, and access to resources on the skill and knowledge levels of OHS representatives).
- Based on the assessment findings, identifying and prioritising the most critical skill and knowledge gaps among OHS representatives.
    - Developing the innovative strategies for improving the training and development programs for OHS representatives for strengthening their competencies.

5.9 Exploring beneficiation skills that can be prioritised in the MMS - Functional Imperative

The aim of the study is to determine the critical skills that the MMS should prioritise for the successful implementation of mineral beneficiation in South Africa.

Key focus areas:

- Assessing the effectiveness of existing government policies and strategies in promoting and supporting mineral beneficiation in South Africa.
    - Identifying major strengths, weaknesses, opportunities, and threats (SWOT analysis) associated with current policy frameworks.
    - Analysing the role of regulatory and incentive structures in encouraging investment and facilitating growth of minerals beneficiation.

- Identifying and mapping the common minerals currently undergoing beneficiation in South Africa, including specific value chains and product types.
- Identifying specific minerals with high potential for successful beneficiation based on market demand.
- Assessing the economic impact of current beneficiation efforts, including job creation, value addition, and export diversification.
- Mapping the required subsectoral skills across different stages of the beneficiation value chain, considering exploration and resource analysis, mineral processing and purification technologies, product design, manufacturing, and quality control, business development, marketing, and logistics.
- Assessing the current availability and adequacy of relevant skills within the South African workforce, including:
    - Educational and training programs currently offered for beneficiation-related skills.
    - Potential skills gaps and mismatches between existing workforce and future needs.
- Assessing the adequacy and effectiveness of existing skills development programs and training institutions catering to beneficiation-related skills.
- Identifying best practices and transferable lessons learned from international experiences that can be adapted to the South African context.
- Recommending interventions that the MQA can implement to support beneficiation related skills in the MMS.

5.10 Investigating provincial MMS related skills development needs: A case study of North-West, Mpumalanga and Eastern Cape - Functional Imperative

The study aims to identify and analyse the specific MMS-related skills development needs in the North-West, Mpumalanga, and Eastern Cape provinces, taking into account their unique economic landscapes, minerals resource endowments, and their sectoral challenges.

Key focus areas:

- Analysing the effectiveness of current legislation, policies, and strategies driving skills development in the province.
    - Assessing the alignment of provincial frameworks with national strategies (e.g. DDMs).
- Analysing the population demographics of the province (e.g., age distribution, gender, and racial representation, educational attainment levels and skillsets of working-age population).
- Establishing a detailed profile of the MMS in the province, including:
    - Main mining commodities extracted and processed.
    - Size and composition of the existing workforce
    - Types of companies operating in the sector (national, multinationals, small-scale miners).
- Analysing the economic performance of the MMS compared to other sectors in the provincial economy.

  - Assessing its contribution to Gross Domestic Product (GDP), job creation, and revenue generation.
- Identifying the existing mining-related occupational shortages and skills gaps within the province and reasons thereof.
  - Identify the skill mismatches between the skills required by mining companies and the skills available in the community.
- Assessing the adequacy and effectiveness of existing skills development programs in addressing provincial needs.
  - Analysing the capacity offerings of technical colleges, universities, and industry-specific training providers in addressing the skills development in the province.
- Identifying the common skills development needs of community members living near mining operations, beyond mining-specific jobs.
  - Analysing the demand for skills in related sectors such as agriculture, manufacturing, tourism, and service industries.
  - Assessing the need for entrepreneurial and business development skills for local economic empowerment.
- Gathering insights on the community and companies' experiences in accessing skills development offerings from the MQA.
- Exploring the potential synergies between skills development needs of the MMS for upskilling and reskilling existing workforce for diversification into other sectors.
- Identifying potential partners and stakeholders relevant to addressing skills development needs in the province.

Note: Please note that the research described above encompasses three distinct studies, each focusing on a specific province: North-West, Mpumalanga, and the Eastern Cape. These studies will be conducted independently, allowing for tailored insights into the unique context and needs of each province.

6. RESEARCH COLLABORATIONS: PARTNERSHIPS WITH PRIVATE AND PUBLIC INSTITUTIONS REGARDING SKILLS DEVELOPMENT IN THE MMS

One of the principles of the NSDP is to encourage greater inclusivity and collaboration amongst key stakeholders. As such, the NSDP seeks to promote:

6.1 Collaboration through partnerships within the public sector as well as between the public and private sectors to support effective skills development.

6.2 A focus on quality education and training provision and articulation between programme and qualification offerings to ensure effective learning to work pathways.

6.3 A strong focus on workplace-based learning in both public and private sectors.

6.4 Partnerships across the skills development system with both private and public providers; and

6.5 Effective and meaning stakeholder engagement to support ownership and participation among stakeholders including social partners, individuals, employers, labour, providers, prospective learners, and the public.

7. RESEARCH FUNDING AND PROCUREMENT

The MQA's procurement practice is governed by section 217 of the Constitution of RSA, Public Finance Management Act, 1999 (Act 1 of 1999) and Treasury Regulations. Therefore, procurement decisions on research provision always considers cost, equity, fairness, accountability, transparency, functionality, and quality considerations. In addition, the MQA as a SETA has put in place systems and procedures to put in effect its approved Supply Chain Management Policy as well as the Discretionary processes.

The MQA shall enter into private and public partnerships with institutions that express interest form a partnership/s to undertake research in line with the MQA mandate especially its research agenda. The MQA intends to fund research within the parameters of its own financial resources.

8. CONCLUSION

The MQA research agenda is informed by the mandate which finds expression in its five-year strategic plan and annual performance plan. Through research, labour market intelligence is gathered to continually inform and support objective decision making for skills development planning in the sector.

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