



KWAZULU-NATAL PROVINCE

# Skills Development Needs in KwaZulu-Natal

A study identifying MMS-related skills gaps, community training needs and strategic opportunities in KwaZulu-Natal — commissioned by the Mining Qualifications Authority.

## KZN VS NATIONAL UNEMPLOYMENT (Q1 2024)



## 9 DISTRICT MUNICIPALITIES COVERED

- eThekweni
- Amajuba
- uMgungundlovu
- Zululand
- iLembe
- Harry Gwala
- Ugu
- uMkhanyakude
- uMzinyathi

**47%**

SURVEY PARTICIPANTS WITH MATRIC QUALIFICATION

**869**

COMMUNITY MEMBERS SURVEYED ACROSS 9 DISTRICTS

**28 yrs**

MEDIAN AGE — YOUTH-DOMINATED PROVINCE

**9**

STRATEGIC RECOMMENDATIONS PROPOSED

**31.5%**

UNEMPLOYMENT RATE Q1 2024

**9**

DISTRICT MUNICIPALITIES

**40%**

COMPLETED SECONDARY — 2ND HIGHEST IN SA

**20%**

MANUFACTURING + CONSTRUCTION GVA

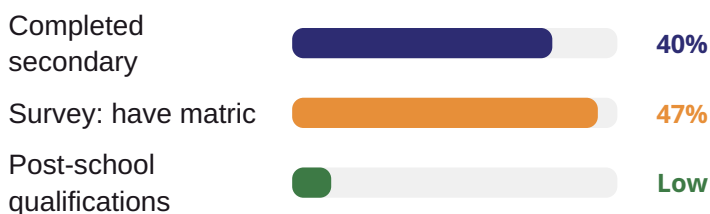
KwaZulu-Natal is one of SA's **most populous and economically diverse provinces** with diverse mining operations — from extraction and processing to smelting and downstream manufacturing. The study surveyed **869 community members** across 9 district municipalities and interviewed mining companies and training institutions.

**28 yrs**

MEDIAN AGE (YOUTH-DOMINATED)

**40%**COMPLETED SECONDARY  
— 2ND HIGHEST  
NATIONALLY**47%**SURVEY PARTICIPANTS  
WITH MATRIC**31.5%**OFFICIAL UNEMPLOYMENT  
Q1 2024

## EDUCATION PROFILE · PROVINCIAL



Concern: learners moving away from Mathematics citing difficulty, weak teaching quality, unclear career links and exam anxiety.

### TOP SCHOOL SUBJECTS COMPLETED

Life Sciences

Mathematics

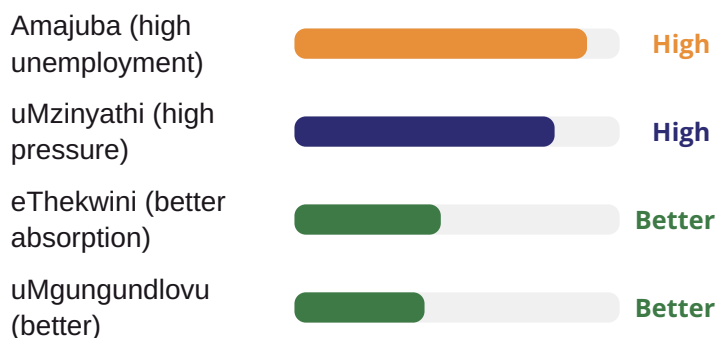
Math Literacy

Geography

Physical Sciences

## LABOUR MARKET BY DISTRICT

Women = Largest Share of Participants. Employment concentrated in: government services, finance & business, construction and agriculture. Mining notable but localised.



## THE BROKEN SCHOOL-TO-WORK PIPELINE

School



Training

△ Gap



Work Experience

△ Gap



Employment

Companies require experience young people don't have. Many are trapped in a cycle where they cannot progress from school into sustainable work. Awareness of 4IR, digital and renewable energy skills remains **extremely low**.

## KZN MINING OPERATIONS

## Extraction

Primary mining ops

## Processing

Mineral processing

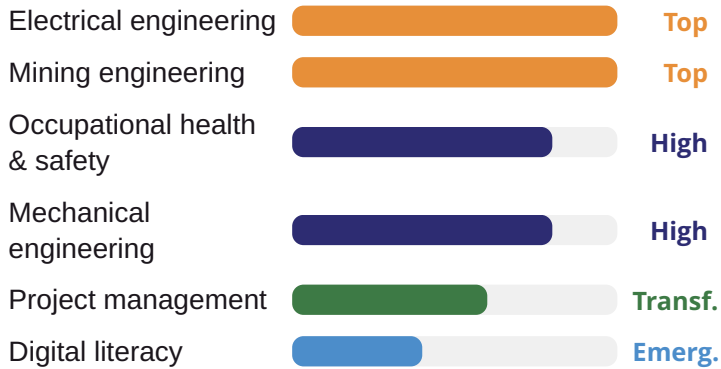
## Smelting

High-temp ops

## Manufacturing

Downstream value

## PRIORITY SKILLS FOR MMS ACCESS (SURVEY)



Only a **small percentage** are aware of MMS training; familiarity with MQA is **extremely low**.

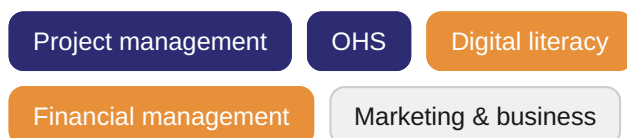
## RECRUITMENT &amp; TRAINING CHALLENGES

- ▶ **Local recruitment preferred** but community members lack foundational education and technical knowledge.
- ▶ Gaps in **Mathematics & Physical Science** at Matric constrain MMS access.
- ▶ Limited understanding of **mining standards and safety procedures**.
- ▶ **Hard-to-fill artisan vacancies** — limited accredited training and trade test facilities.
- ▶ Only a **small percentage** are aware of MMS training programmes.

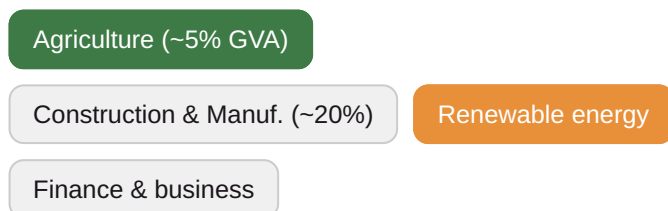
**Automation** is transforming machine operator and TMM driver roles — workers need digital literacy, computer-based competencies and ability to interact with automated systems.

## ECONOMIC OPPORTUNITIES &amp; TRANSFERABLE SKILLS

## MOST VALUED TRANSFERABLE SKILLS



## TOP ECONOMIC SECTORS



## 4IR &amp; AUTOMATION GAP

Awareness of skills associated with the Fourth Industrial Revolution, automation in mining and renewable energy is limited. Knowledge of digital and automated systems remains **very low** across communities.

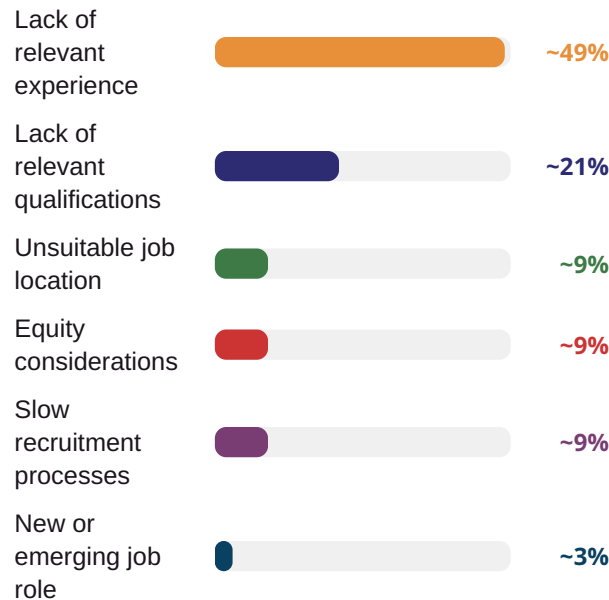
# Hard-to-Fill Vacancies (HTFV) Analysis

**Hard-to-fill vacancies** are occupations that an employer was unable to fill within 12 months (WSP-ATR 2024 definition). Data drawn from mining company submissions in KwaZulu-Natal. **Lack of relevant experience** is the largest single barrier (~49%), followed by lack of relevant qualifications (~21%).

## OCCUPATIONS IDENTIFIED AS HARD-TO-FILL

Occupation	OFO Code	Primary Reasons
<b>Auto Electrician</b>	2021-671208	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Lack of qualifications</li> <li>Unsuitable location</li> <li>Equity considerations</li> <li>Poor remuneration</li> <li>Slow recruitment</li> <li>New/emerging role</li> </ul>
<b>Diesel Mechanic / Field Service Tech (Diesel)</b>	2021-653306	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Lack of qualifications</li> <li>Unsuitable location</li> <li>Equity considerations</li> <li>Poor remuneration</li> <li>Slow recruitment</li> <li>New/emerging role</li> </ul>
<b>Section Engineer / Engineering Manager</b>	2021-132104	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Lack of qualifications</li> <li>Unsuitable location</li> <li>Equity considerations</li> <li>Poor remuneration</li> <li>New/emerging role</li> <li>Slow recruitment</li> </ul>
<b>Mining Manager / General Manager Mining</b>	2021-132201	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Unsuitable location</li> <li>Lack of qualifications</li> <li>Equity considerations</li> <li>Slow recruitment</li> </ul>
<b>Mine Overseer (Production)</b>	2021-312101	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Lack of qualifications</li> <li>Equity considerations</li> <li>Slow recruitment</li> </ul>
<b>Engineering Foreman</b>	2021-312103	<ul style="list-style-type: none"> <li>Lack of experience</li> <li>Lack of qualifications</li> <li>Equity considerations</li> </ul>

## PRIMARY RECRUITMENT BARRIERS



**Top 3 hardest to fill:** Auto Electrician · Diesel Mechanic / Field Service Tech · Section Engineer/Engineering Manager. These maintenance, engineering and operational roles were most frequently cited by KZN mining companies as consistently difficult to source.

## TOP-UP SKILLS — RECURRING GAPS

Electrical & Instrumentation

Mine Production Process

OHS Skills

Digital Literacy

Leadership & Supervision

Planning & Organising

## KEY RECRUITMENT CONTEXT (KZN)

- ▶ **Automation is reshaping roles** — machine operator and TMM driver positions now require digital literacy and computer-based competencies alongside traditional skills.
- ▶ **No local trade test centres** for several artisan trades — candidates must travel out



## TOP SKILLS NEEDED BY COMMUNITIES (SURVEY)



## MQA COMMUNITY AWARENESS

**38%**

Familiar with MQA

Familiar with MQA	38%
Somewhat familiar	9%
Not familiar	53%

eThekwini: better absorption · uMzinyathi and Amajuba: most affected

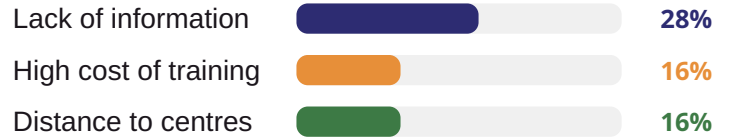
## BARRIERS TO ACCESSING TRAINING (SURVEY)

**51%**

SAY ACCESS IS "VERY DIFFICULT"

**73%**

UNAWARE OF ANY MMS TRAINING PROGRAMME



## EMERGING OPPORTUNITY SECTORS

### Renewable Energy

Wind turbine technicians · Solar PV · Battery storage

Province-wide

### NEVs & Auto Manufacturing

Mechatronics · NEV mechanics · Toolmakers

Gert Sibande

### Agro-processing & Mining

Agriculture · GIS surveying · Extraction

Rural DMs

### Digital & 4IR Economy

Automation skills · Data analytics · Remote operations

All districts

## PRIORITY DEVELOPMENT FOCUS AREAS (SURVEY)

**30%**

Prepare Youth for Mining Careers

**23%**

Alternative Skills / Economic Diversification

**23%**

Support Local Businesses / Mining Sector

**17%**

Upskill Current Mining Workers

**9 Recommendations for KZN — Evidence-Based Action Plan.** Each recommendation directly addresses a specific gap or barrier identified through community surveys, key informant interviews and WSP-ATR data analysis.

1

### Strengthen School-to-Work Skills Pipelines

Collaborate with DBE, TVETs and mining companies. Fund bridging programmes in Mathematics, Physical Science and technical literacy. Saturday classes, learner support.

🕒 **Short-term Priority**

3

### Increase Artisan Training & Trade Test Capacity

Capacity-building support to training providers. Explore expansion of trade test facilities within KZN to address hard-to-fill artisan vacancies.

🕒 **Medium-term**

5

### Strengthen OHS Training Approaches

Innovative OHS using simulation and real-life case studies. Target entry-level AND supervisors. Emphasise "invisible hazards" including psychological risks.

🕒 **Immediate**

7

### Promote Portable & Transferable Skills

Include training in agriculture, construction, manufacturing, tourism and renewables in MQA programmes to reduce mining dependency and support mine-closure resilience.

🕒 **Medium-term**

2

### Expand Work-Integrated Learning

Incentivise mining companies via conditional grants to offer learnerships and apprenticeships. Create community-level placement hubs through TVET partnerships.

🕒 **Short-term Priority**

4

### Digital & Emerging Technology Training

Short courses in digital literacy, automated mining, analytics, remote operations and renewable energy fundamentals. Accessible platforms for community reach.

🕒 **Medium-term**

6

### Integrate Soft Skills into All Programmes

Make employability training and mentorship mandatory in all MQA-funded learnerships. Communication, teamwork, problem-solving and leadership are non-negotiable.

🕒 **Immediate**

8

### Strengthen Local Enterprise Development

Develop targeted skills for community SMMEs to support progression into higher-value mining supply chain segments consistent with SLP objectives.

🕒 **Medium-term**

9

### Establish a Provincial Pool of Industry Practitioners

Create a structured provincial pool of experienced mining industry practitioners to support mentorship, workplace learning facilitation and career guidance for youth and NEET communities across all 9 districts.

🕒 **2026–2027 (Ongoing)**

## IMPLEMENTATION TIMELINE

2

**IMMEDIATE**  
Recs 5 & 6

2

**SHORT-TERM**  
Recs 1, 2

4

**MEDIUM-TERM**  
Recs 3,4,7,8

1

**ONGOING**  
Rec 9