



LABOUR MARKET
INTELLIGENCE PARTNERSHIP

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UPDATE 2015

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The Labour Market Intelligence Partnership is a collaboration between government and a national research consortium that aims to build a credible institutional mechanism for skills development in South Africa.

The LMIP proposes to:

ADVANCE information and knowledge of the post-school education and training system in relation to economic development and growth

BUILD labour market intelligence to inform strategic planning and interventions

DEVELOP future research capacity in the areas of education and training, skills development and labour market analysis

ENHANCE the institutional capacity of DHET and its stakeholders to gather and interpret labour market information

CREATE a community of practice through dissemination activities with policy-makers and researchers

The Department of Higher Education and Training (DHET) contracted the Human Sciences Research Council (HSRC) to lead the research consortium in support of the goal of developing a mechanism for skills planning.



The Labour Market Intelligence Partnership (LMIP) Project is entering its **third year of existence** and I am pleased to say, has stirred much interest in skills planning among stakeholders, other government departments and researchers.

The project has indeed gone a long way in provoking thought about how signals from the labour market could be used to inform the provision of education and training. There is little doubt that the research generated through the LMIP will help not only the Department of Higher Education and Training (DHET), but the country as a whole, in identifying current and projected imbalances between the supply and demand for skills in the country, and in providing recommendations on how best we should address these.

Synergies between the work of the DHET and the research generated through the LMIP have improved dramatically over the past year. The research-policy nexus has strengthened, particularly in relation to the report that the DHET is working on jointly with the LMIP research consortium on skills supply and demand in the country.

A key achievement of the DHET has been the development of the List of Occupations in High Demand that was published by the Minister of Higher Education and Training in November 2014. This list is still being refined to improve on the methodology used for its compilation, and will draw on the research generated through the LMIP to improve its validity and credibility. The list is currently being used as a signalling tool to inform enrolment planning

at the institutional level, and has been used as a key information source by the Department of Home Affairs to compile its own Critical Skills List.

In pursuit of benchmarking its work on skills planning with other countries, the DHET, together with the Human Sciences Research Council, recently undertook a study tour to European countries. The study tour confirmed that South Africa has the basic pillars in place to establish a credible institutional mechanism for skills planning, but that there are important gaps to fill.

The DHET would like to thank all the organisations who have been participating in the journey towards establishing a credible institutional mechanism for skills planning through the LMIP policy roundtables, workshops, meetings and other consultation processes.

Mr Firoz Patel
Deputy Director-General
System Planning

Department of Higher Education and Training

The challenge for any government is to anticipate the skills that are needed for the current and future economy. This information can be used to plan the size and shape of the post-school education and training (PSET) system.

In 2012, when the Minister of Higher Education and Training, Dr Blade Nzimande, launched the LMIP, he requested that we conduct research to provide a scientific basis to 'set up systems for reliable data informing skills need, supply and demand in our labour market in a manner that will enable our country, including government and business to plan better for human resources development needs of our country'.

Three years later, we are pleased to note that the LMIP has become synonymous with skills planning in South Africa. The LMIP conducted a number of research studies to understand the supply and demand for skills and the extent to which supply responds appropriately to demand. Our research studies, both quantitative and qualitative, focused on institutions and individuals, and ways in which the two could be connected. Our approach was that we needed to build on, adapt and consolidate what we already have, rather than starting afresh. It is clear much has been achieved in the country and we need to strive for greater coordination and coherence in relation to what we already have. We had extensive engagements: first with the relevant directorates in the DHET, and then, through a series of policy roundtables, with other government departments, Sector Education and Training Authorities (SETAs), academic institutions, professional organisations and business.

What have we learnt from our research so far?

- The LMIP proposes an *inclusive socio-economic skills planning approach* for South Africa. We must raise the levels of basic and PSET in the country. For effective skills planning we must read the signals of demand from the economy, government growth strategies and industrial policies. Government, with partners, will use this labour market intelligence to ensure better alignment between skills demand and an inclusive skills development strategy.
- The LMIP proposes the establishment of a Skills Planning Unit (located in the DHET in the short term). Relevant data, information and signals from the economy, education and the labour market will feed into this unit. This vibrant and cutting edge unit needs to engage regularly with senior staff at the DHET, other government departments and social partners to make sense of the relevant knowledge to generate skills policy. A budget must be allocated to this Skills Planning Unit.
- The skills planning architecture must be populated with information that is available from present datasets (with modifications for additional data) and future datasets must be identified.
- Skills planning is a complex process and involves more than statistical analyses. We must understand the dynamics that shape individual behaviours, the contours and capabilities of institutions that make them act in particular ways, the responsiveness

of education and training institutions to the changing demands from firms and workplaces, the changing nature of work and workplaces, and the response of the labour market to graduates.

The LMIP is unique in the scale and scope of its research, as well as the nature of the collaboration between government (DHET) and the research community. It was a learning experience for both researchers and government workers to negotiate working this research-policy nexus. We would like to thank the researchers, the DHET colleagues and other social partners for participating in this journey to build a credible institutional mechanism for skills planning for South Africa.

Dr Vijay Reddy
Executive Director
Education and Skills Development
Human Sciences Research Council

The contours of a credible skills planning mechanism

The LMIP recognises the skills planning mechanism as both a process and a structure.

Skills planning refers to how labour market intelligence is used to inform decision-making processes at the national, sectoral and occupational levels.

The skills planning mechanism includes the technical processes associated with the collection, collation, analysis and dissemination of information, the institutional structures for informing and undertaking the planning process, as well as the wider political economy and how this influences decisions related to how resources are allocated for skills development.

Skills planning, at its core, requires an understanding of the interaction between the demand and supply of skills and the extent of this match. The Labour Market Intelligence System for South Africa (LMIS-SA) will collect, collate, analyse and disseminate information. The LMIS-SA will then allow government to make more informed decisions about:

- Where and how to invest its education and training resources;
- How to allocate work visas;
- Enrolment planning, new programmes and the infrastructure investment needed to make this possible; and
- Career guidance programmes.

A skills planning information framework

Figure 1 outlines the framework for the data and information required to plan for skills needs. Data will be collected on:

- The context in which skills development takes place;
- Skills supply;
- Current and future demand for skills;
- Mismatches leading to occupations in high demand; and
- The education and training outcomes that support the planning process.

Key indicators for skills planning

For the LMIS-SA, we need to establish the following:

- What data needs to be collected;
- Where the data will come from; and
- The arrangements that need to be in place to access the data.

Data will be collected from existing administrative data, from modifications to surveys to produce the required information, and by setting up new surveys to address data gaps. To access data from other government departments, the Skills Planning Unit (SPU) will sign Memoranda of Understanding with these entities for the form and frequency of the information required. Table 1 outlines the data and information categories required and the sources for this data.

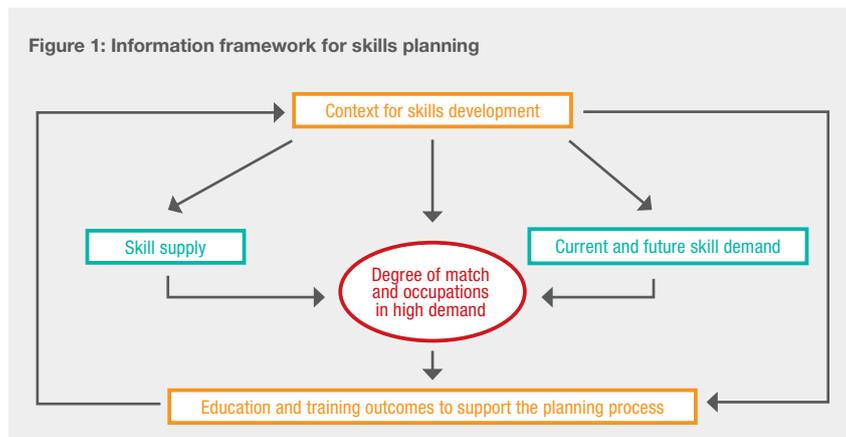


Table 1: Information and data sources

Key areas of information	Data and information	Data sources
Economic context	Economic drivers (GDP, exports, investments)	National Accounts, Treasury
	Demographic changes	StatsSA
Supply: Stock and flow of skills	Grade 9 and 12 pass rates	Department of Basic Education
	Enrolment and graduation rates at higher education and Technical and Vocational Education and Training (TVET) colleges	Higher Education and Training Management Information System
	Immigration rates	Department of Home Affairs
	Training in the workplace	SETA Labour Market Survey, SETA Workplace Skills Plans (WSPs) and Annual Training Reports (ATRs)
Demand	Sectors and occupations of employment	StatsSA
	Job vacancies	Job Opportunity Index
	Skills gaps (critical skills)	SETA Labour Market Survey
	Earnings	Quarterly Employment Statistics Survey
	Hard-to-fill vacancies	Quarterly Employment Statistics Survey
	Global demand	Global surveys
Replacement demand	Turnover of personnel	SETA Labour Market Survey, WSPs and ATRs
	Mortality rates	Population Register, DHA; StatsSA
	Retirement from workforce	SETA Labour Market Survey, StatsSA
	Emigration rates	Department of Home Affairs
Future demand	Changes in population	StatsSA
	Projections in economic growth	National Treasury Forecasting Model, Medium Term Budget Policy Statement, Linked Macro Education Model for SA (Wits)
	Skills signals for government growth priorities	Skills estimates from Strategic Integrated Projects and other growth priorities
	Skills signals for new and potential business	Department of Trade and Industry
Education and training outcomes	Pipeline from schooling	Department of Basic Education, new datasets
	Not in Education, Employment and Training	Quarterly Labour Force Survey, General Household Survey
	Access to and outcomes of universities and TVET colleges	HEMIS, new datasets
	Access to and outcomes of artisanal programmes	Artisanal databases, new datasets
	Access to and outcomes of community programmes and adult education centres	New datasets
	Workplace learning programme	Reforms to WSPs, new datasets
	Instructors' educational qualifications	New datasets

After consultation and engagement with key stakeholders, the LMIP has identified 20 indicators to understand changing supply and demand, 10 indicators to understand occupations in high demand, and 13 indicators that monitor the outcome of education and training programmes.

For 13 of the supply and demand indicators, six occupations in high demand indicators, and five skills monitoring indicators, the data is readily available, and it will be possible to use these first stage indicators immediately. Data to populate the remaining indicators does not exist or its use is restricted, and hence, will take longer to collect. Creating these second-stage indicators will require changes to data collection instruments – including agreements between the DHET and other government departments to share datasets – or the creation of new instruments and datasets.

Building new data sources: Piloting a SETA labour market survey

The development of new data sources to improve the currently available labour market information is critical for effective skills planning. A clear example of the insufficiency of data supply is the inability to use Workplace Skills Plans and Sector Skills Plans to generate granular, high-quality, analytical and statistical information on specific labour markets. The lack of relevant data has contributed to the inability of SETAs to determine occupations in high demand in their sector.

The LMIP therefore piloted a SETA labour market survey with the aim of filling a gap in existing labour market datasets that do not sufficiently analyse skills demand and training supply at the sectoral or regional level. The key objective of the pilot survey, conducted in the Manufacturing, Engineering and Related Services SETA (MerSETA), was to obtain detailed training and labour market information that is *directly* relevant to the labour market in which the SETA operates.

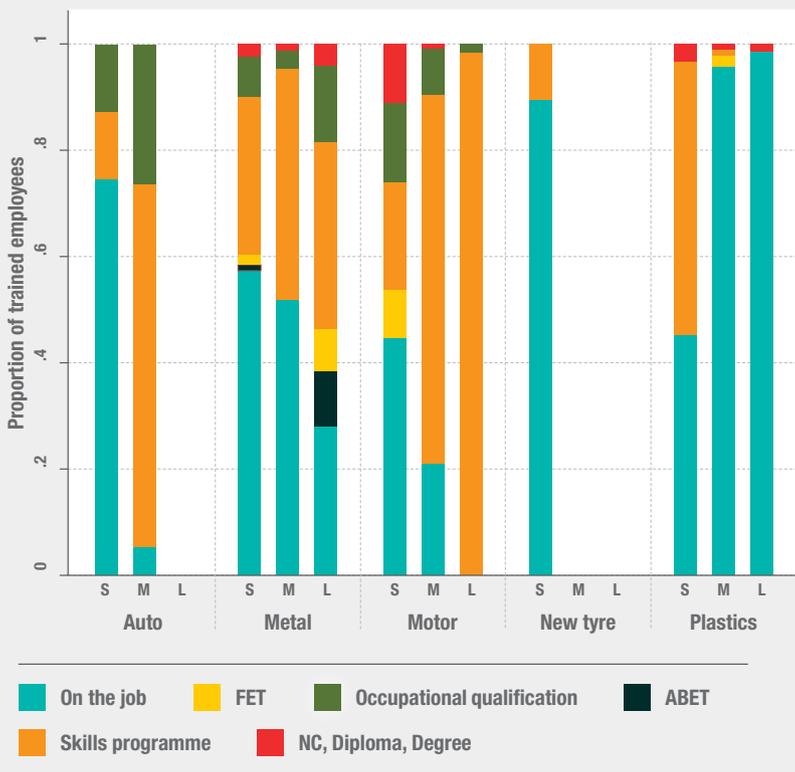
The survey aimed to achieve its purpose in multiple ways. First, it was designed to collect baseline data about the employment profile of each firm (including employees' current qualifications, job titles, contract types and wage levels), as well as the nature of the education and training provided; this data was collected at the employee level. Second, the survey focused on understanding the rationale for training at the firm level and explored the factors that enabled or hindered training within the firm. The survey also assessed the firm's perspective on the performance of the SETA, using a selection of relevant performance indicators.

The overarching purpose of the survey was to provide information primarily on:

- Who is gaining access to training;
- Why and how they are chosen; and
- What the impact has been for the firm and the individual.

This information, combined with the questions about vacancies, was used to understand current skills gaps in a more nuanced and granular way at a sub-sectoral level. Skills planners will be able to obtain a range of insights into specific sectoral labour markets from the resulting dataset. Figure 2 overleaf provides examples of the types of data and analysis that can be obtained by the survey.

Figure 2: Types of training by sub-sector and firm size
(S=small, M=medium, L=large)



From the pilot, amongst other descriptive insights, the following conclusions were possible on the private returns to training in this sector:

- Degree or diploma holders experience significantly positive returns to training relative to those with lower levels of education; and
- Different *types of training* yield different returns depending on the individual's initial level of education. We found that:
 - Large positive returns to 'skills programmes' are experienced by degree holders, whereas trainees with a matric have smaller positive returns;
 - There are positive returns to 'on the job' training where there is a high enough level of initial education (above post-matric diploma); and
 - Positive and higher returns to a wider range of training programmes are experienced by those with at least a post-matric diploma.

These results would seem to support the notion that general and specific skills are complementary and that a higher level of general education increases the returns to more specific types of training.

The survey will make important improvements to workplace skills planning and offer critical individual unit record data that will allow richer and more specific information on training over time.

Research to
provide labour
market intelligence
and support
credible skills
planning

The role of PSET institutions in predicting labour market outcomes

There is an established body of research that emphasises the strong relationship between good quality higher education and improved economic and welfare returns. This research offers empirical estimates of the association between the type of higher education institution attended (college or university) and the probability of employment and levels of earnings among graduates, for the South African labour market.

Using data from three waves of the National Income Dynamics Study (NIDS), we investigated whether there is an earnings premium linked to the type of institution attended, and whether the probability of employment differs by the institution attended. To do this, we looked at the earnings and employment returns of university degrees compared to Technical and Vocational Education and Training (TVET) college diplomas.

Our research found that attending a university, relative to a college, increases an individual's chances of employment by 7–10%, and the earnings premium to attending a university is two-fold (Figure 3).

The study also found that the higher return could be a reflection of increasing returns to university degrees, or be due to changes in the composition of graduates – there are fewer graduates from universities than colleges, leading to higher wages for the former. Overall, in both employment and earnings, and in

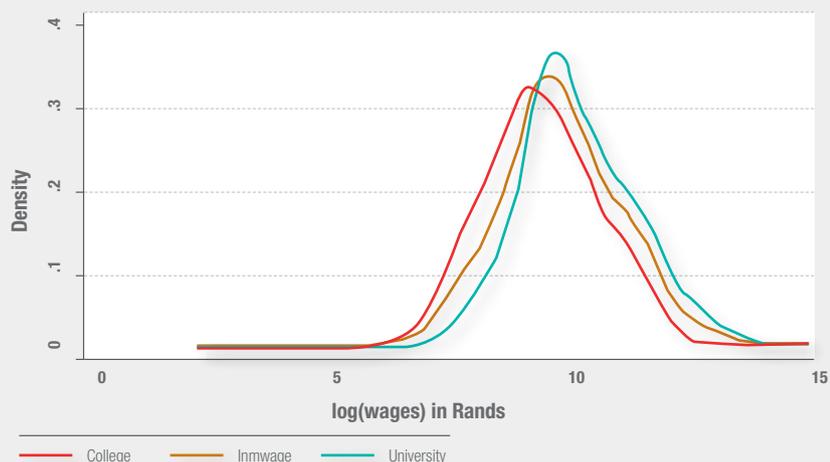
addition to a possible perception of higher productivity, university degrees seem to give a positive signal to employers to offer higher wages to university graduates relative to TVET college graduates.

The study found, however, that the level of education attained (i.e. the skills level) is an important determinant of wage relative to occupation. The effect of this is that employers are increasingly selective in their employment practices, displaying a preference for university graduates. This has led to skills inflation. Criteria for such selectivity have included

tertiary education qualification and the institution attended.

While the returns to education and employment are high for males and females, further disaggregation reveals demographic nuances. Women are disadvantaged in both employment and earnings; also earnings vary by occupation and by both geographical area and province. Statistically, race and home language alone play no role in influencing employment prospects and earnings. However, they are important in shaping education and employment access

Figure 3. Wages earned by type of higher education institution attended



Notes: Wages are in real Rand value; sample of age group 24 to 64 with college education; 'Inmwave' represents logarithmic monthly wage.

Source: Author's calculations based on NIDS Wave 1, 2, and 3

and success (see the following section on graduate transitions in the Eastern Cape). Increased premiums at the top of the wage distribution favours white South Africans, but this phenomenon is likely to be driven by educational and institutional quality differentials, rather than by race.

There have been substantial efforts in the last two decades to close the quality gap in higher education institutions, and new (both public and private) institutions have been established to meet the increased demand for higher education. The results indicate that universities are associated with a higher conditional probability of employment and significant returns to earnings.

The DHET will have to examine the types of improvements necessary for TVET colleges to ensure higher employment outcomes and an increase in the return to earnings of their graduates.

University graduates' transition to the labour market: Eastern Cape Graduate Study

In South Africa, there is very little information on the pathways of students through different higher education institutions. While analyses of existing administrative datasets are instructive, they are limited in terms of their specificity and focus. They provide insufficient information on whether young people get jobs, whether these jobs are in areas related to their studies, who is more likely to find employment and who struggles to access the labour market.

Our research on graduate pathways through higher education provides a more institutionally focused understanding of the destinations of university graduates. The central premise was that the trajectories and labour market outcomes of distinct groups of young people is critical to informing a skills system that contributes to inclusive development.

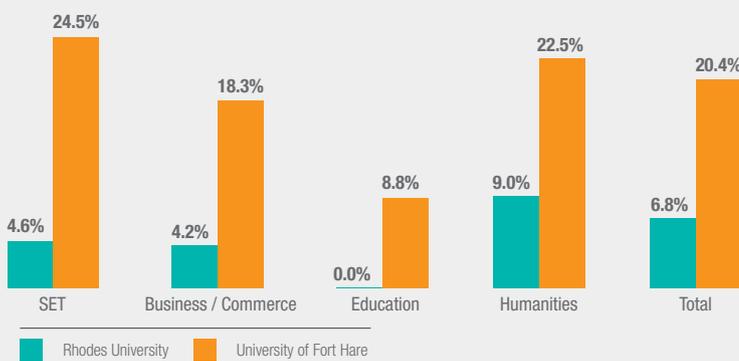
The LMIP conducted a graduate tracer study (using new methodological approaches) that followed successful graduates from the 2010 and 2011 cohorts of the two traditional universities in the Eastern Cape – Rhodes University and the University of Fort Hare.

The overarching findings of this research are that schooling background, race and gender are significantly associated with successful career choices and the risk of unemployment.

In particular, the survey revealed that black graduates, specifically those from low quintile schools, were significantly less likely to graduate with their first choice degree, especially those wanting to study a Commerce or Science, Engineering and Technology (SET) subject.

The levels of unemployment among graduates from both universities were very low, when compared to the working age population as a whole. However, the study found that women from low quintile schools were most likely to face unemployment. Critically, we also found significant variation in unemployment levels between Rhodes graduates and Fort Hare graduates. As shown in Figure 4, the unemployment rate for Fort Hare graduates (20%) was almost three times higher than that of Rhodes graduates (7%).

Figure 4: Broad unemployment rates (as of 1 March 2015) by field of study



The study found that among the Rhodes University cohort, and after controlling for all other factors, black graduates were significantly more likely to be unemployed. The results further indicated that schooling background and gender were greater predictors of unemployment than field of study among Fort Hare graduates.

For those employed, the results indicated that successful job search strategies differ significantly, and graduates from Rhodes are far more likely to report finding a job through a social network than graduates from Fort Hare. Rhodes graduates are more likely to be employed in the private sector, whereas Fort Hare graduates are significantly more likely to be employed in the public sector.

The study holds several implications for skills planning, especially with regard to the equity and efficiency of higher education institutions:

- Graduates from poorer schools still carry significant disadvantages into higher education and the labour market even after graduating from a university; and
- Greater support is necessary for students from low quintile schools in identifying employment opportunities.

Public attitudes to work

In South Africa, data-driven scientific studies of the public's attitudes to work, their expectations, preferences, and job search behaviours are limited. To address this gap, the LMIP initiated a study about social attitudes of the public towards the labour

market. These questions were fielded through the Human Sciences Research Council's (HSRC) *South African Social Attitudes Survey* in 2013. Data was collected from a representative national sample that included the employed, unemployed work-seekers, and those who are inactive in the labour market.

Here, we illustrate the kinds of insights that can be gained from analysis of the dataset, in response to key questions.

What does the public perceive as causes of unemployment?

The general public attributed unemployment to two key issues:

- Societal factors (such as discrimination, poverty or government failure to create employment); and
- Lack of quality education and skills training.

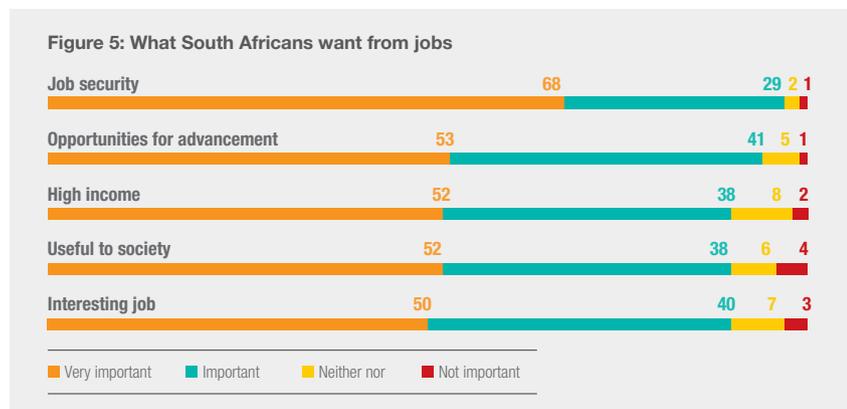
What are public views on the value of education and inter-generational mobility?

The public strongly believes that education is key to a positive labour market outcome and improved labour force participation. This finding was most pronounced amongst those with no or lower education levels.

Social and economic mobility was strongly linked to education, which was seen to facilitate economic advancement, irrespective of family background. This view was most pronounced amongst black Africans, and those with low educational levels.

What do South Africans want from jobs?

Job security and opportunities for advancement were the two most important factors cited by respondents. High income was seen as the third most important factor (Figure 5).



However, there are discrepancies (Figure 6) between what those in employment perceive as important, and their actual experience on the job, in relation to two key expectations: economic rewards from their labour, and prospects for upward social mobility. The data suggests that workers were relatively more satisfied with the content of their employment (its usefulness to society, provides interesting content and security) than its ability to meet their immediate and longer-term material needs.

To what extent are workers satisfied with their jobs?

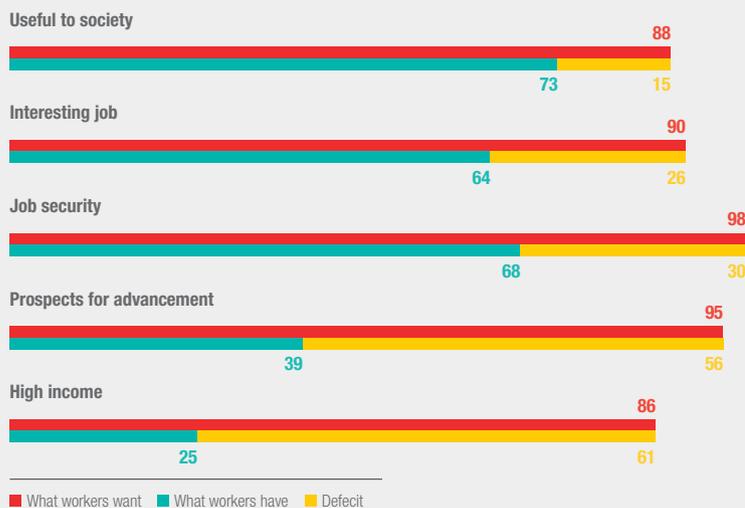
Almost two-thirds of the employed expressed some level of satisfaction with their jobs. Job satisfaction is significantly, and most positively, associated with workers rating their jobs as providing interesting content, fair remuneration and security. Black African workers remain less satisfied with their jobs than white workers, and those with a low or medium living standard also record significantly lower satisfaction scores than those with a high living standard.

To what extent do workers perceive a match between their qualifications and what is required in a job?

Just under a quarter (21%) of employed South Africans regard themselves as over-qualified for their job. Almost a third (30%) stated that they were under-qualified for their job. Some socio-demographic groups are more likely than others to be mismatched. Black Africans were almost three times more likely to be over-qualified compared to white and Indian workers. The incidence of over-qualification was also more common amongst rural commercial farm dwellers; those living in informal settlements were more likely to be under-qualified.

Such findings underscore the value of a national survey seeking to understand the public's attitudes and experience of employment/unemployment. Attitudes and experience of work vary significantly, and are influenced by the individual's race, educational attainment and social class position. The results also highlight different dimensions of disadvantage, suggesting the need for adaptable and targeted policies in order to benefit vulnerable segments of our population. Understanding the general public's attitudes towards the labour market and perceived bottlenecks to participation can provide critical insights to inform government's skills planning interventions. Our research places the need to take into account the views and beliefs of ordinary South Africans firmly on the policy agenda.

Figure 6: Discrepancies between what workers want from jobs and what they have



**Responsiveness to firm demand:
Enhancing interactive capabilities
across the PSET system**

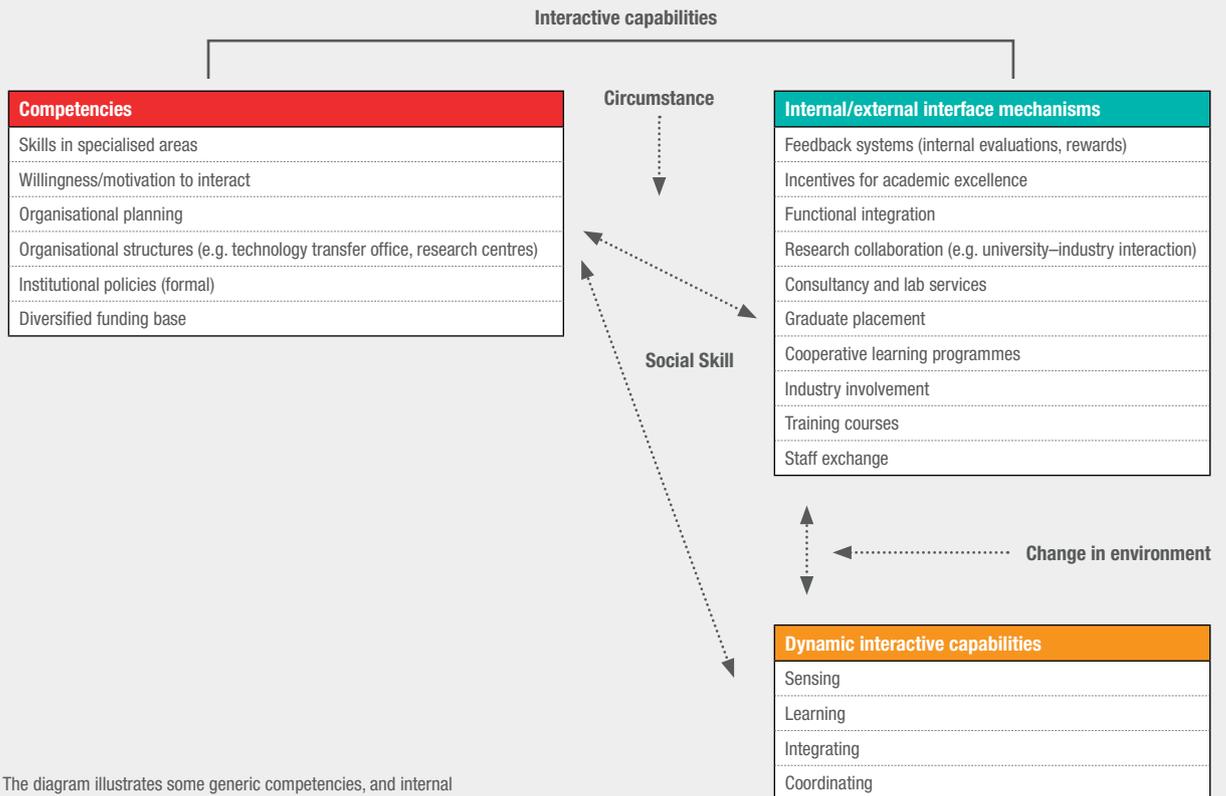
Effective skills planning requires an understanding of the degree to which PSET organisations and firms interact and are mutually responsive to each other's needs. Such interaction will allow firms and skills planners to inform and contribute to education and training activities, and allow universities, TVET colleges and other public/private providers to understand how they can respond to changing technological and skills needs of firms and provide the 'right' graduates for the workplace and the national economy.

The LMIP conducted three case studies of sectoral systems of innovation as a means to identify the nature of interaction and the capabilities to improve understanding of skills supply and demand: astronomy and the Square Kilometre Array (SKA), automotive component manufacturers in the Eastern Cape, and sugarcane growers and millers in KwaZulu-Natal.

Our evidence suggests that:

- Universities' and colleges' interactions with firms, government agencies, professional bodies and other actors hold many benefits, including funding, professorial chairs and improved graduate employment prospects. Such linkages may assist universities and colleges to *achieve their strategic goals, and to contribute to national economic and social development goals*. However, we found that many academics and lecturers actively oppose any initiatives they perceive as imposing a narrow instrumental approach to training.
 - Perceptions of quality and expertise inform firms' choice of institution: they are more willing to work with universities and colleges that produce quality graduates, and that are perceived to have the strongest expertise in the firms' field.
 - Universities and colleges must develop their 'interactive capabilities' – expertise, structures and interface mechanisms – to better link with firms, government and other actors. Figure 7 depicts the kinds of competencies and interactive capabilities required.
- There are many *external interface mechanisms* that are historically and currently very effective, such as public–private partnerships, multi-stakeholder advisory bodies, careers advisory and placement services, testing centres and research centres. We provide examples of good practice interface mechanisms that support collaboration with actors in key sectors in the local environment, and simultaneously draw in academics in other fields as needed.
 - Responsiveness to rapid technological change requires an ability to continually sense changes in the environment, adapt to the demand for new skills, and coordinate change across the university or college. Where these institutions have developed these 'dynamic interactive capabilities', they are able to operate in more proactive and strategic ways, in line with their own core missions and goals, rather than reacting in an ad hoc way to firm demand or to policy requirements.

Figure 7: Framework for enhancing universities' and colleges' competencies and capabilities to respond to firm demand



Interactive Capabilities in Action: Best-case Examples

Public-private partnerships (PPPs) for improving responsiveness to firm demand in the sugarcane growing and milling sectoral system of innovation

The Owen Sithole College of Agriculture (OSCA), a historically black college, was in the process of establishing itself as a Centre of Excellence in Sugarcane Agriculture. To achieve this goal, the college collaborated with the Department of Agriculture and Tongaat Hulett's Cane and Rural Development Unit to develop a seed cane scheme that could be used as a training facility for OSCA students. Thus, the college used a PPP strategy to develop its capabilities and to make itself relevant to the local context where the largest proportion of cane growers can be found.

Partnering to produce learnerships in the automotive components manufacturing sectoral system of innovation

East Cape Midlands Further Education and Training College has a partnership with a large tyre firm to run learnerships in Rubber Technology. The firm sources apprenticeship candidates from the college and describes the college as a 'leader in rubber technology'. The college's emphasis on work experience to help students to pass trade tests and/or achieve final certification on non-artisanal programmes, provides an enabling environment for such partnerships. Furthermore, the college operates a 'finishing school' targeted at meeting the requirements of these certification routes.

Research Chairs as key competencies at universities for big-science projects such as the SKA

The SKA Human Capital Development Programme funds and manages a dedicated set of Research Chairs that are modelled on the Department of Science and Technology (DST) system. These are based at Rhodes University, Stellenbosch University, the University of Cape Town, the University of the Western Cape and the University of the Witwatersrand. The Research Chairs are used as a base from which to run comparatively large research groups that operate at the global frontier of knowledge production and are making a substantial contribution to the knowledge requirements of the SKA.

Planning for artisanal skills: Understanding changing occupational milieus and identities

This LMIP study on shifting occupational boundaries underscores how critical it is to direct more efforts towards understanding changes in the nature of work. Three artisanal trades undergoing different facets of change were investigated:

- Mechatronics in the automotive sector;
- Electricians in the mining sector; and
- Millwrights in the metals sector.

Evidence from these cases shows a range of changes to the nature of work that impact on our understanding of artisanal occupations, with practical implications for planning. The analysis can provide valuable feedback into the skills planning system to promote better alignment.

The nature of work has changed, but it is not clear whether such changes expand, elevate or contract the work of artisans. This has clear implications for our understanding of the level and nature of knowledge, competencies, tasks and skills related to this occupational group and of course how we then plan for such skills.

The case study investigating mechatronics as a field of practice in the automotive industry, for example, found that the occupational classification is not in line with the current nature of artisanal work. The introduction of a mechatronics technician at the level of trade has resulted in a mismatch between the level of work such technicians are being trained to perform and the perceived level of artisanal

work in the field. This has led the majority of respondents in the study to assert that the current occupational categorisation of such functionaries is incorrect.

‘Companies are going to be forced to recognise these people at a higher level because of what they are going to be able to do – they are definitely not an artisan anymore. And that’s why we changed our entry requirements and made it to a higher level ... that we got people who are analytical thinkers.’

Technician: Automotive sector

in the millwright case, another nuance of change to artisanal work emerged. The nature of required artisanal skills in a trade can vary depending on the infrastructural realities of the local labour market. Technological advancement and international changes to the nature of production would suggest that the work of millwrights requires greater electronic knowledge and skills; however, many South African firms do not have the capital required for rapid uptake of such advancements. Rather, as firms transition to newer technologies and equipment, in this case, the traditional millwright skills set will continue to be in demand for some time, to keep old equipment functioning.

‘There is no one that can give you formal training ... because of the nature of the equipment. Some of the equipment is almost as old as I am ... With older equipment like that, it’s really difficult ... We’re trying to modernise the plant, but to do that we can only do small portions at a time, because it’s very expensive.’

Millwright apprentice: Metals sector

The electricians’ case highlighted a similar, but further dimension. Global change suggests the elevation of artisanal work in the electrical field due to the greater use of electronics. However, the investigation in this case illustrated how the sectoral context influences the abilities of artisans to make any claims to higher occupational status. We found social boundaries (e.g. race and gender) in the mining sector to be pervasive, continuing to impact on the nature of work and on the interaction between different occupational groups.

‘I think a lot of people still think of themselves as white and black as that mind-set hasn’t changed ... Yes, they [black] see them [white] as better than them, so maybe a white person is walking by and then they run, start working and they don’t maybe understand that, that guy also may be a construction worker, but because he is white they assume he has got power.’

Electrician: Mining sector

‘The environment ... for a woman ... it’s not what I would like to work in ... I think based on the gender thing it’s still a problem ... [they think because] you’re a woman, [you] are weak.’

Electrical apprentice: Mining sector

The findings show that there are important nuances to the way in which changes to the nature of work translate and impact different artisanal trades, with implications for how we plan for the provision of such skills. On the basis of the research, we therefore suggest that planning for artisanal skills must place the trade, field of practice, sectoral and national labour market context at the centre of its approach.

The research-policy nexus in operation

Research capacity-building through a bursary programme

In 2014/2015, 11 students received scholarships for Honours and Masters-level research and study on areas related to skills planning and labour market analysis.

Research communication

Our project website – www.lmip.org.za – is an important communication tool and the focal point for disseminating research, project news and information. The LMIP online

research repository is aiming to become a hub for unpublished and non-peer-reviewed literature on PSET in South Africa. We are collecting and archiving documents, such as consultant reports, impact assessments and research reports that are not readily available in the public domain from SETAs, government departments and research agencies. We are also sourcing Masters and PhD theses on labour, skills and the economy in South Africa and internationally.

Table 2: LMIP repository holdings as at May 2015

Output	Number
Journal articles (academic)	19
Books	10
Government publications	3
Working papers	50
Policy briefs	1
Presentations	48
Research reports	109
Theses	73
Total	313

Policy roundtables have continued to function as multi-stakeholder spaces for critical engagement and interaction on policy-relevant aspects of the research. In addition, we run a seminar programme that aims to open up emerging research to critical academic and policy scrutiny with the aim of building the research field.

Reflection on the LMIP bursary scheme from a 2014 recipient

I am overcome with gratitude in being awarded the scholarship. The financial generosity of the scholarship has aided the lifting of the financial burden that had been placed on my single parent for many years. By being awarded the scholarship I was able to focus on my education and put all my energy into doing all in my classes and work on a dissertation of which I am proud. In addition, it has allowed me to be one step closer to my educational goals. My experience as a Masters student has been a truly rewarding one. I have been exposed to courses that have helped me develop valuable skills. I have particularly enjoyed and value the quantitative skills I have developed from courses such as Demographic Methods and Research Methods. I have recently submitted my dissertation titled “The Influence of Socioeconomic Status on Achievement in Mathematics and Science in South Africa: Evidence from the Trends in International Mathematics and Science Study 2011.” My hope is that this research contributes to the understanding of how best to equalise the educational opportunities afforded to South African learners/students so that the labour skill demands of our growing economy can be met. The overall social and economic development of South Africa depends on the health of the education system.’

Ms Nthabiseng Marie, HSRC-NRF Labour Market Research scholarship, Masters in Population Studies, University of KwaZulu-Natal

Table 3: LMIP Policy Roundtables in 2015

Frameworks, Indicators and Data for Skills Planning in South Africa.	January 2015
Planning for Artisanal Skills: What is Missing?	February 2015
SETA Labour Market Survey Pilot: Moving Toward Better Labour Market Information and Intelligence	August 2015

At the Ministerial Briefing in March 2015, LMIP researchers presented key high-level findings of the research to the Minister of Higher Education and Training, Dr Blade Nzimande, and senior officials from the DHET. The Minister and officials engaged closely with the presentations, probed researchers on their findings and commended the LMIP on the quality and progress that has been made to date.

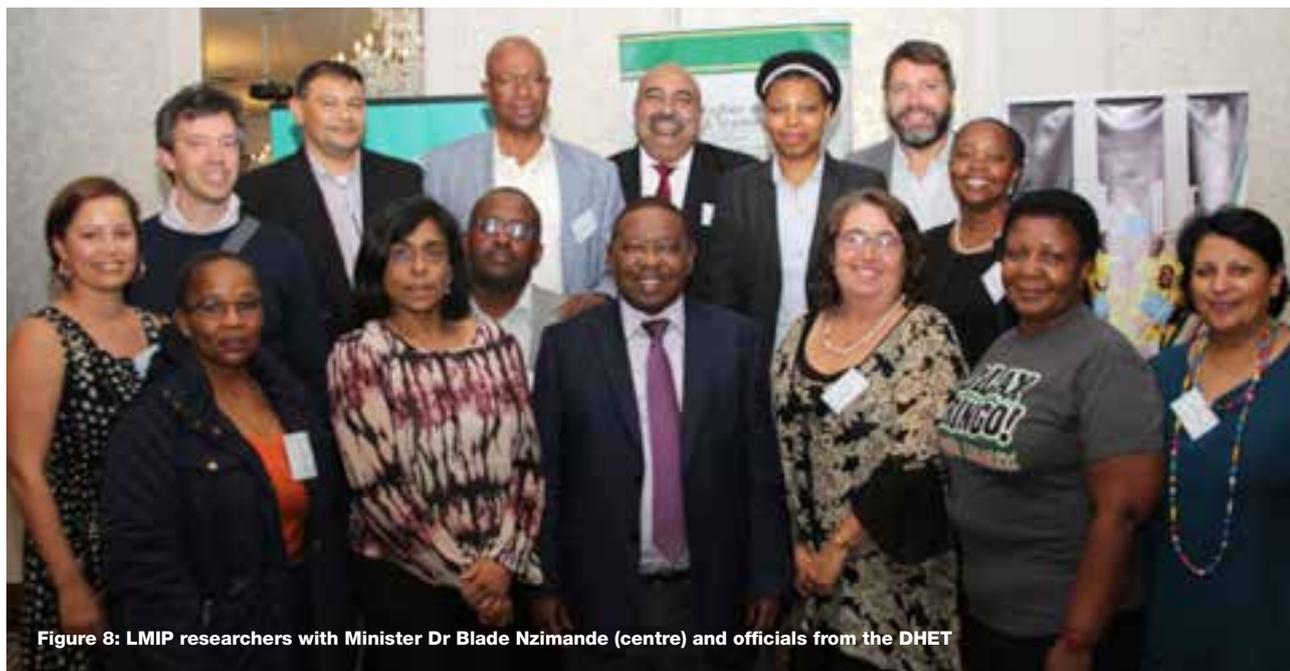


Figure 8: LMIP researchers with Minister Dr Blade Nzimande (centre) and officials from the DHET

Recommendations emerging from LMIP research

Government must invest in setting up a credible Labour Market Intelligence System for South Africa.

This will allow government to make more informed decisions about:

- ➔ Where and how to invest its education and training resources;
- ➔ How to allocate work visas;
- ➔ Enrolment planning, new programmes and the infrastructure investment needed to make this possible; and
- ➔ Career guidance programmes.

The LMIP proposes an inclusive socio-economic skills planning approach for South Africa.

South Africa must aspire to raising levels of basic and post-school education and training. For effective skills planning we must interpret the signals of demand from the economy, government growth strategies and industrial policies. Government, with partners, will use the Labour Market Intelligence System for better alignment between skills demand and an inclusive skills development strategy.

The LMIP has identified a set of indicators and data to inform skills planning.

Data will be collected from existing administrative datasets, from modifications to surveys to produce the required information, and by institutionalising new surveys to address data gaps. The Skills Planning Unit

(SPU) must sign Memoranda of Understanding with the relevant government departments and entities for the form and frequency of the information required.

SETAs will be responsible for conducting a biennial training survey of firms within their domain.

The survey must collect skills and training information from employees and firms to provide insights on the extent, nature and impact of training at the firm and individual level. The survey will inform improvements in workplace skills planning and offer critical individual unit record data that will allow more nuanced information on training over time.

The DHET must examine the improvements necessary at TVET colleges to improve employment and earning outcomes of their graduates.

At the moment, university degrees seem to give a positive signal to employers to offer higher wages relative to TVET college graduates.

Higher education institutions must provide systematic information about the employment rate of their graduates.

Each institution must conduct tracer studies on graduates to improve the match between higher education and the labour market outcomes. These tracer studies should be coordinated through the SPU working, for

example, with Universities South Africa.

A national-level monitoring system of the social attitudes of South Africans towards the labour market should be established.

This will provide a dataset that can be analysed for more nuanced skills planning. Regular fielding of core questions and rotating themes through the South African Social Attitudes Survey is recommended.

The 'dynamic interactive capabilities' of academics, departments, centres and leadership in PSET institutions must be enhanced.

This will enable universities and colleges to respond to changing skills demands in strategic and proactive ways. An advocacy process to effect a change in thinking will be required.

Planning for artisanal skills must move beyond occupational classifications.

It should place the trade, field of practice, sectoral and national labour market context at the centre of its approach.

Reports on the LMIP website

- ➔ *An architecture for skills planning: Lessons and options for reform in South Africa* (Marcus Powell & Vijay Reddy, 2014)
- ➔ *Approaches and methods for understanding what occupations are in high demand and recommendations for moving forward in South Africa* (Marcus Powell, Vijay Reddy & Andrew Paterson, 2014)
- ➔ *Roadmap for the implementation of a skills planning unit* (Marcus Powell & Vijay Reddy, 2014)
- ➔ *High-level audit of administrative datasets* (Andrew Paterson, Mariette Visser, Fabian Arends, Menzi Mthethwa & Titus Nampala, 2014)
- ➔ *Occupational shifts and shortages: Skills challenges facing the South African economy* (Haroon Borhat, Sumayya Goga & Benjamin Stanwix, 2014)
- ➔ *Towards understanding the distinctive nature of artisan training: Implications for skills planning in South Africa* (Nhlanhla Mbatha, Angeliqe Wildschut, Bongiwé Mncwango, Xolani Ngazimbi & Tembinkosi Twalo, 2014)
- ➔ *Investigating Employer Interaction with Employment Services South Africa (ESSA)* (Fabian Arends, Sybil Chabane and Andrew Paterson, 2015)
- ➔ *Growth, employment and skills: The New Growth Path revisited* (Haroon Borhat & Nan Tian, 2014)
- ➔ *Responding to shifting demand for skills: How do we get firms and post-school education and training organisations to work together?* (Glenda Kruss, Il-haam Petersen, Simon McGrath & Michael Gastrow, 2014)
- ➔ *Education, employment and economic growth: Exploring the interactions* (Haroon Borhat, Aalia Cassim & David Tseng, 2014)
- ➔ *Understanding interactive capabilities for skills development in sectoral systems of innovation: A case study of the Tier 1 automotive component sector in the Eastern Cape* (Simon McGrath, 2015)
- ➔ *Understanding interactive capabilities for skills development in sectoral systems of innovation: A case study of the sugarcane growing and milling sector in Kwazulu-Natal* (Il-haam Petersen, 2015)
- ➔ *Understanding interactive capabilities for skills development in sectoral systems of innovation: A case study of the astronomy sector and the Square Kilometre Array (SKA)* (Michael Gastrow, 2015)

LMIP researchers

Theme 1: Establishing a foundation for labour market information systems in South Africa

Vijay Reddy, Human Sciences Research Council
Marcus Powell, CEI International
Fabian Arends, Human Sciences Research Council
Bongiwe Mncwango, Human Sciences Research Council
Xolani Ngazimbi, Human Sciences Research Council
Thembinkosi Twalo, Human Sciences Research Council
Mariette Visser, Human Sciences Research Council
Andrew Paterson, Human Sciences Research Council
Sybil Chabane, KNC & Associates
Cuen Sharrock, Palladian Consulting
Lynn Woolfrey, University of Cape Town

Theme 2: Skills forecasting: Supply and demand

Asghar Adelzadeh, Applied Development Research Solutions
Siphelo Ngcwangcu, REAL Centre, University of the Witwatersrand
Peliwe Lolwana, REAL Centre, University of the Witwatersrand

Theme 3: Studies of selected priority sectors

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Sumayya Goga, Development Policy Research Unit, University of Cape Town
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Benjamini Stanwix, Development Policy Research Unit, University of Cape Town
Nan Tian, Development Policy Research Unit, University of Cape Town
David Tseng, Development Policy Research Unit, University of Cape Town
Derek Yu, Development Policy Research Unit, University of Cape Town

Theme 4: Reconfiguring the post-school sector

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Michael Gastrow, Human Sciences Research Council
Bongiwe Mncwango, Human Sciences Research Council
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Theme 5: Pathways through education and training and into the workplace

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Bongiwe Mncwango, Human Sciences Research Council
Pundy Pillay, University of Witwatersrand (until May 2013)
Michael Rogan, Rhodes University
Ulandi du Plessis, Rhodes University
Allyssa Williams, Rhodes University
Teboho Tsietsi, Rhodes University
Kanyiso Ntikanca, Rhodes University
Rejoice Mabhena, Rhodes University
Hussein Badat, Rhodes University
Sifisokuhle Xulu, Rhodes University
Allan Ncube, Rhodes University

Theme 6: Understanding changing artisanal occupational milieu and identities

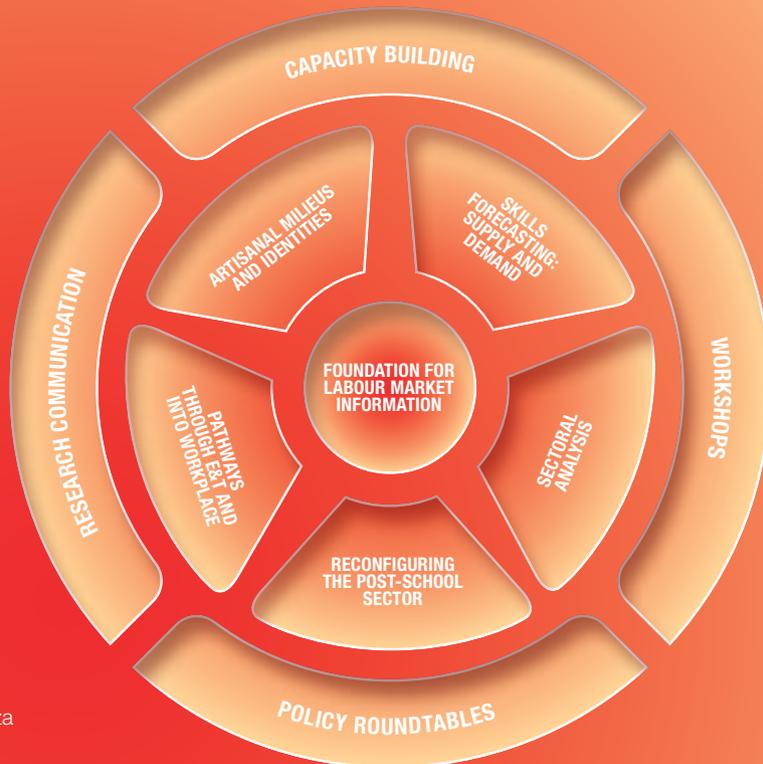
Angelique Wildschut, Human Sciences Research Council
Vanessa Davidson, JCM Research and Evaluation Services
Jeanne Gamble, University of Cape Town/Consultant
Jane Gallagher, JCM Research and Evaluation Services
Carel Garisch, JCM Research and Evaluation Services
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