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DEPARTMENT OF HIGHER EDUCATION AND TRAINING

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**THE FRAMEWORK FOR THE ANNUAL REPORT ON SKILLS SUPPLY
AND DEMAND IN SOUTH AFRICA**

One of the objectives of the Department of Higher Education and Training is to establish a credible institutional mechanism for skills planning. To this end, I, Bonginkosi Emmanuel Nzimande, MP, Minister of Higher Education and Training, hereby publish the *Framework for the Annual Report on Skills Supply and Demand in South Africa*.



DR BE NZIMANDE, MP
MINISTER OF HIGHER EDUCATION AND TRAINING

DATE: 30/09/2015

INTRODUCTION

1. The White Paper for Post-School Education and Training (DHET, November 2013) observes that ‘although South Africa has put in place a range of ambitious measures to improve skills planning, the system has neither produced good information about skills needs, nor increased the quality of provision in areas needed by the economy’.
2. In addition, The National Skills Development Strategy (NSDS III) indicates that there is currently no institutional mechanism that provides credible information and analysis with regards to the supply and demand of skills. It states that ‘while there are a number of disparate information databases and research initiatives, there is no standardised framework for determining skills supply, shortages and vacancies, and there is no integrated information system for skills supply and demand across government’.
3. The Department of Higher Education and Training (DHET) has identified the provision of credible information, analysis and signals on the demand and supply of skills as an important contribution to the establishment of the institutional mechanism for skills planning in South Africa. In addition, the Department is in the process of building effective and efficient skills planning capability that can forecast the optimal mix of intermediate and high skills graduates in order to respond to the needs of the labour market.
4. Information and insights into the labour market will, inter alia, guide the Department in allocating resources which could result in improved access, equity, quality, relevance, performance, efficiency and sustainability of the post-school education and training system.
5. This framework communicates the nature and scope of the planned annual report on skills supply and demand. It provides an outline of the content of the report, and lists the indicators and data sources that will be used in the report.

PURPOSE

6. The annual report is viewed as the ultimate product of the Labour Market Intelligence Project (LMIP) which is a research project undertaken by a research consortium led by the Human Sciences Research Council (HSRC), in partnership with the Department of Higher Education and Training, to support the department in establishing a credible institutional mechanism for skills planning.
7. The first annual report to be published will provide information and insights into the overall picture of skills supply and demand (as well as the imbalances thereof), and presents the analysis of the information and research emerging from the LMIP.
8. The report is intended to contribute towards the improvement of the responsiveness of the post-school education and training system to the needs of the economy and the society, by supporting decision-making on matters pertaining to skills planning, and will be used as a strategic resource to inform the following:
 - Supply-side planning in post-school education and training institutions;
 - Funding strategies and prioritisation, particularly in relation to the determination of funding norms and the allocation of student funding through instruments such as the national student financial aid scheme (NSFAS);
 - Strategies to attract skilled personnel from outside of South Africa in the short to medium term;
 - The development of qualifications and programmes that are relevant to the needs of the labour market;
 - Sector, industry, regional and employer plans;
 - Skills needs for special government projects; and
 - Information for career development.
9. In essence, the report will identify skills needs through research, analysis and stakeholder engagement to ensure that the information and analysis is utilised to inform decision-making in relation to the issues listed above.

POLICY MANDATE

10. The White Paper for Post-school Education and Training (2013) outlines the vision of the Department of Higher Education and Training (DHET) to build an expanded, effective and integrated post-school education and training system.
11. It asserts that “if the provision of education and training is to be better coordinated with the needs of society and the economy, central information about skills needs is required”. Therefore “identifying current and future skills demand as accurately as possible is extremely important if the goals of the National Development Plan, the New Growth Path and the Industrial Policy Action Plan are to be achieved”.
12. The White Paper (DHET, November 2013) notes further that the identification of skills needs can be used to inform human resource planning, funding allocations, programme development, and immigration strategies.
13. The Human Resource Development Strategy of South Africa (HRDSSA, 2009) also emphasises the need to increase the number of appropriately skilled people to meet the demands of our current and emerging economic and social development priorities.
14. Emanating from the mandates mentioned above, the Medium Term Strategic Framework (MTSF) requires the Department of Higher Education and Training to conduct an analysis and modelling of labour market skills using Labour Market Information (LMI). The MTSF indicates that the analysis be in the form of an annual report on skills supply and demand that must be published by the end of 2015/16 financial year, and to thereafter become a yearly publication.

FRAMEWORK FOR THE ANNUAL REPORT ON SKILLS SUPPLY AND DEMAND IN SOUTH AFRICA: TRENDS, PROJECTIONS AND POLICY IMPLICATIONS

Section	What is the overall purpose of this section?	What will be the content?	Indicators
Abbreviations and Acronyms			
Glossary of terms			
Executive Summary (Max 2 pages)	To provide an overview of the report's key findings, analysis and recommendations.	<ul style="list-style-type: none"> • Mismatches between skills supply and demand and the implications thereof. • Recommendations on possible interventions. 	
Introduction	To present the background, rationale, objectives, approach and structure of the report, and to identify the target group	<ul style="list-style-type: none"> • Background: Policy context (NDP, NGP, IPAP, MTSF, SDA, Employment Equity Act, targets). • Purpose of the report. • Rationale: (problem) high unemployment simultaneous with high levels of occupational demand – need to reduce mismatches between supply and demand; need to improve responsiveness). • Objectives: To inform planning for the education and training system. • Audience: Who can use the report • Methodological issues (including limitations)- Explain the use of the OFO. • Approach to skills planning. • Overview of report. 	

Section	What is the overall purpose of this section?	What will be the content?	Indicators
The state of the economy and labour market	To provide an overview of trends and projections in the macro-economy and the labour market.	<ul style="list-style-type: none"> Performance of SA economy (compared to regional and global performance) - historical trends and projections of growth using 3 scenarios. Demographics. Employment and unemployment levels, especially for youth. Productivity/Competitiveness. Socio-political issues that may impact on skills supply and demand issues. Government development plans. (NDP, NGP, IPAP, SIPs) and implications for skills development. 	<ul style="list-style-type: none"> GDP time-series GDP by sector Changes in Employment/Unemployment rates Future projections for GDP Demographic shifts/ projected changes in population Comparison will be made with similar indicators in other countries Changes in NEET
Supply	<ul style="list-style-type: none"> To provide information, analysis and insights about the nature and extent of "supply" in the economy. Conceptualisation and definition of supply (current and forecast). Indicate the different components of supply. Methodology: What are the measures of supply and how do they fit together to provide a holistic picture (current and future) of supply How supply has been measured (current and 	<ul style="list-style-type: none"> The qualifications structure of the employed and unemployed workforce. Patterns/volumes of training/non- accredited skills acquisition. Enrolment and graduate rates at post schooling level. Changes in immigration/migration rates. Flows. Qualitative information about employer perceptions on supply (from the SA Social Attitude Survey and other research undertaken by SETAs, the private sector, etc.). Qualitative information about student attitudes towards certain occupations (SASAS). 	<ul style="list-style-type: none"> Grade 9 and 12 pass rates Highest level of education attainment amongst the employed and unemployed population. Trends and projections in enrolment rates by field of study. Trends and projections in graduation rates by field of study. Changing supply by qualification and field of study. Immigration/migration trends at occupational and sectoral levels. Percentage of unemployed graduates. Trends in school-to-college transition Trends in school-to-university transition Trends in college-to-work transition

Section	What is the overall purpose of this section? (future)	What will be the content?	Indicators
Demand	<ul style="list-style-type: none"> To provide information, analysis and insights about the nature and extent of "demand" in the economy Indicate the skills implications for government policies and programmes, e.g. SIPS, IPAP, NGP and NDP. Conceptualisation and definition of demand (current and forecast. Indicate the different components and types of demand). What are the measures of demand and how do they fit together to provide a holistic picture (current and future) of demand. 	<ul style="list-style-type: none"> The focus will be on current demand and future demand. On current demand, focus will be on: <ul style="list-style-type: none"> coverage of occupational and sectoral employment change vacancy and earnings trends <p>This will provide a clear picture of skill needs and how they are changing over time.</p> <ul style="list-style-type: none"> On future demand, focus will be on: <ul style="list-style-type: none"> The level of replacement demand (retirement, mortality, migration, job changes). Nature and extent of expansion demand. Skills need for government growth priorities. Identify areas of growth, as well as areas of decline (sectors, occupations, skills levels). Determine where there is a high demand for skills (skilled, semi-skilled and low-skilled. Occupations will be used as proxy for skill level). How does this impact on the demand for skills? Projections will be made over a 15 year period. Global trends and projections on occupational demand and their impact on 	<ul style="list-style-type: none"> Trends in university-to-work transition Percentage of people that received training within the last 5 years Changes in employment by sector, occupations and skill level. Changes in average earning levels (by occupational level as compared to national averages). Changes and patterns in job vacancies (Job Opportunity Index). Changes in the numbers of labour market entrants (by occupational levels and qualifications). Replacement demand (Mortality, retirement of workers from the labour force, migration and job changes). Occupational prospects by sector. Labour productivity Hard to fill vacancies. Turnover of personnel. New entrants in the labour market. Global Demand. Percentage of workforce aged 55+ and over. Changes in emigration rates (Currently this data is not available). Changes in the average total number of hours worked. Projections of job openings (expansion and replacement demand) by

Section	What is the overall purpose of this section?	What will be the content?	Indicators
		<p>South Africa's shortages and skill supply.</p>	<ul style="list-style-type: none"> occupational groups. Changes in skills intensity of occupations (high, medium and low skills). Projections of job openings (expansion and replacement demand) by educational qualifications.
<p>Imbalances between skill supply and demand</p>	<p>To identify current, emerging and projected imbalances between the supply and demand for skills.</p>	<ul style="list-style-type: none"> Concept and definition of imbalance (current and forecast). Indicate the different elements of imbalances. Methodology: What are the measures of imbalance and how do they fit together to provide a holistic picture (current and future). Methodology: How the interface between occupations and qualifications has been managed. To provide an analysis of current imbalances in the supply and demand of skills. To identify current occupational shortages. Identify skills gaps (e.g. numeracy skills). Identify government priorities for skills development. Graduate destinations TVET: Progress and responsiveness of provision. HE: Progress and responsiveness of provision. Qualitative perceptions about recruitment and job application experiences. 	<ul style="list-style-type: none"> Percentage of HE graduates with a qualification-job match. Changes in average pay by occupations (price). Changes in proportion of workers in a specific occupation. Change in the total number of hours worked (percentage change from the previous year). Average number of applicants/suitable applicants per vacancy (by occupation). Change in Vacancy rates. SETA scarce skills list. Excess of job seekers versus job openings for selected occupations. Changes in median vacancy duration. Ratio of vacancies to numbers in occupation. Hard to fill vacancies. Percentage of new graduates (6 months after completion) employed full-time. Percentage of new graduates (6 months after completion) not employed. Mean full-time hours worked by new

Section	What is the overall purpose of this section?	What will be the content?	Indicators
Future Projections	<ul style="list-style-type: none"> To provide scenarios, simulations and forecasted projections of the future. To provide the economic and education forecasting needed for skill planning. To provide analysis of current imbalances in the demand and supply of skills. To present projections and analysis of the evolution of the skill gap. 	<ul style="list-style-type: none"> Background and rationale for producing quantitative skills projections. Policy and other input assumptions used in the LM-EM. Projections of trends in key macroeconomic, sector and SETA indicators. Projections of future trends in growth and employment at national, sectoral and SETA levels. Analysis of past and future trends in supply of educational qualifications by demographic category such as race and gender. Analysis of past and future trends in job openings. 	<p>graduates (6 months after completion) per week.</p> <ul style="list-style-type: none"> Mean full-time annual salary of new graduates. Percentages of graduates with education-job match (3 years after completion). Number of new visas granted as a percentage of new graduates. Greater need to match qualifications to occupations. (Explore a student survey for them to match the qualifications they are studying for to occupation they wish to pursue with the qualification.
		<ul style="list-style-type: none"> Changes in population and labour force by age and gender (2015-2025)-(Source: Statistics South Africa and LM-EM). Labour market participation rates (2015-2025)-(Source: LM-EM). Supply trends in labour force (15+) by qualification (2015-2025)-(Source: LM-EM). Past and likely change of future supply of qualifications, labour force (15+) (2005-2015, 2015-2025)-(Source: LM-EM). Projected change in labour force by qualification (2015-2025)-(Source: LM-EM). Incidence of low, medium and high qualifications in the labour force- 	

Section	What is the overall purpose of this section?	What will be the content?	Indicators
			<p>(Source: LM-EM).</p> <ul style="list-style-type: none"> • Past and likely future trends in job openings by sector and SETAs (2015-2025)-(Source: LM-EM). • Shares of sector employment (2005, 2015, 2025)-(Source: LM-EM). • Past and likely future sectoral employment change (2005-2015, 2015-2025)-(Source: LM-EM). • Past and likely future trends in job openings by occupation (2005-2025)-(Source: LM-EM). • The changing occupational structure of employment (2005, 2015, 2025)-(Source: LM-EM). • Past and likely future trends in employment by educational qualifications (2005-2025)-(Source: LM-EM). • Net employment change by occupation and qualification (2005-2015, 2015-2025)-(Source: LM-EM). • Unemployment rates by qualification category (2005-2025)-(Source: LM-EM). • Relative unemployment rates by skill level -(Source: LM-EM). • Job opening and job seekers by skill level over the projection period, as a percentage of 2015 employment-(Source: LM-EM). • Job opening and job seekers by

Section	What is the overall purpose of this section?	What will be the content?	Indicators
			<p>occupation over the projection period, as a percentage of 2015 employment- (Source: LM-EM).</p> <ul style="list-style-type: none"> • Occupations projected to face shortages or surpluses by skill level- (Source: LM-EM). • Excess of job seekers versus job openings for selected occupations- (Source: LM-EM). • Outlook of balances and imbalances for selected occupations- (Source: LM-EM). • Outlook for occupations usually requiring university education- (Sources: LM-EM and other sources). • Outlook for occupations usually requiring college education or apprenticeship training- (Sources: LM-EM and other sources). • Outlook for occupations usually requiring high school education- (Sources: LM-EM and other sources).
Analysis and interpretation of main findings	<ul style="list-style-type: none"> • To provide an analysis and interpretation of findings, and draw attention to key issues. • Secondary research and other sources will be used to interpret the findings and explain the reasons for mismatches. 	<ul style="list-style-type: none"> • Interpret the previous results; provide an overall 'whole system' narrative going beyond the different 'fragments' of the report. • Provide high level analysis of patterns, relations and priorities. 	

Section	What is the overall purpose of this section?	What will be the content?	Indicators
Policy Implications	<p>The final section will turn to the policy implications of the reports main findings. Key issues will focus upon how supply can be increased over the short, medium and longer term in response to identified priorities. Amongst the issues to be analyzed includes:</p> <ul style="list-style-type: none"> • How to expand enrolments in certain subject areas. • How to use immigration as a temporary solution. • What longer term capital investments are required to expand skills development in other areas? • Implications for student choices. • Policy implications to reduce mismatches. • Other strategies (such as the need for programme, qualification and curriculum review) will need to be touched upon, depending on the nature 	<p>Address the policy implications of the findings at the national policy level, institutional level as well as at the geographic/regional level.</p>	<p>Depending on data availability, analysis and findings at a Municipal level will be provided.</p>

Section	What is the overall purpose of this section?	What will be the content?	Indicators
Annexure A	<p>of the need or bottleneck in the skills development system.</p> <p>To provide additional information/evidence.</p>		<p>Detailed tables on the following:</p> <ul style="list-style-type: none"> • Demographics (working age population) trends and projections by age. • Trend data and projections on supply (graduates by field of study/focused qualifications). • Trend data and projections on employment. • Detailed tables on expansion and replacement demand by occupation. • Detailed tables on expansion and replacement demand by qualification.
Annexure B	To provide technical information on methodological issues.	Technical notes on the indicators used and their methods of calculation.	
Annexure C	To provide information about "Scarce Skills".	List of Occupations in High Demand/Scarce Skills.	

Annexure A: Key measures/ indicators to form part the annual report

Section	Indicator	Data availability	Source of data	Frequency	Disaggregation
State of the economy and labour market	GDP time-series	Yes	National Accounts (Stats SA)	Annually	National & Province
	GDP by sector	Yes	National Accounts (Stats SA)	Annually	Sector
	Changes in Employment/Unemployment rates	Yes	QLFS (Stats SA)	Annually	National, Province, Sector, Qualification, age, gender & race
	Future projections for GDP	Yes	LM_EM	Annually	National, Province & Sector
	Demographic shifts/ projected changes in population	Yes	Mid-year population estimates(Stats SA)	Annually	Age, gender & race
	Comparison will be made with similar indicators in other countries	Yes	(ILO, World Bank, UNESCO, OECD)	Annually	
	Changes in NEET	Yes	QLFS (Stats SA)	Annually	Age, gender & race
	Grade 9 and 12 pass rates	Yes	DBE	Annually	Age, gender & race
	Highest level of education attainment amongst the employed and unemployed population.	Yes	QLFS/ QES (Stats SA)	Annually	Age, gender & race
	Trends and projections in enrolment rates by field of study.	Yes	HEMIS/HETMIS	Annually	Education level, field of study, race, age & gender
Supply	Trends and projections in graduation rates by field of study.	Yes	HEMIS/HETMIS	Annually	Education level, field of study, race, age & gender
	Changing supply by qualification and field of study	Yes	HEMIS/HETMIS	Annually	Education level, field of study, race, age & gender
	Immigration/migration trends at occupational and sectoral levels	No	DHA (Need to strengthen the data system with DHA)	Annually	occupation & sector
	Greater need to match qualifications to occupations. (Explore a student survey for them to match the qualifications they are studying for to occupation they wish to pursue with the qualification).	No			
	Percentage of unemployed graduates	Yes	QLFS (Stats SA) as a source to compute the indicator	Annually	Education level, field of study, race, age & gender

Section	Indicator	Data availability	Source of data	Frequency	Disaggregation
Demand	Changes in employment by sector, occupations and skill level.	Yes	QLFS (Stats SA)	Annually	National, province, sector, race, age & gender
	Changes in average earning levels (by occupational level as compared to national averages).	Yes	QES (Stats SA)	Annually	Sector & occupation (2 digit); public and private sectors.
	Changes and patterns in job vacancies (Job Opportunity Index).	Yes, with limitations	DOL JOI & Career Junction	Annually	Sector & occupation (2 digit)
	Changes in the numbers of labour market entrants (by occupational levels and qualifications)	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Replacement demand (Mortality, retirement of workers from the labour force, migration and job changes).	Yes	Population register for mortality (DHA)	Annually	Sector, Occupation (2 digit), qualification, age, gender & race
	Occupational prospects by sector	Yes	QLFS/QES(Stats SA)	Annually	Sector & occupation (2 digit)
	Hard to fill vacancies.	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Labour Productivity	Yes	GDP/QLFS as source to compute the indicator	Annually	
	Turnover of personnel.	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	New entrants in the labour market.	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector & qualification
	Global Demand.	No	Explore Visa list of selected countries and global survey	Annually	Occupation (2 digit) by sector & qualification
	Percentage of workforce aged 55+ and over.	Yes	QLFS (Stats SA)	Annually	National, province, sector, race, age & gender
	Changes in emigration rates (Currently this data is not available).	No	DHA (Need to strengthen the data system with DHA)	Annually	Occupation (2 digit) by sector & qualification
	Changes in the average total number of hours worked.	Yes	QES (Stats SA)	Annually	
	Projections of job openings (expansion and replacement demand) by occupational groups.	Yes	LM-EM Model	Annually	Occupation (2 digit) by sector & qualification

Section	Indicator	Data availability	Source of data	Frequency	Disaggregation
Imbalances between skill supply and demand	Percentage of HE graduates with a qualification-job match	No	Graduate destination study to be commissioned	Annually	Occupation (2 digit) by sector & qualification
	Changes in skills intensity of occupations (high, medium and low skills)	Yes	QLFS (Stats SA) as source to compute the indicator	Annually	Occupation (2 digit) by sector & qualification as proxy for skill level
	Changes in average pay by occupations (price)	Yes	QES(Stats SA)	Annually	Sector & occupation (2 digit), race and gender
	Changes in proportion of workers in a specific occupation (volume)	Yes	QLFS/QES(Stats SA)	Annually	Occupation by sector (2 digit)
	Change in the total number of hours worked (percentage change from the previous year)	Yes	QES(Stats SA)	Annually	
	Average number of applicants/suitable applicants per vacancy (by occupation)	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Vacancy rate	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	SETA scarce skills list	Yes, with limitations	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Excess of job seekers vs job openings for selected occupations	Yes	LM-EM Model	Annually	Occupation (2 digit) by sector & qualification
	Changes in median vacancy duration (imbalances)	Yes, with limitations	JOI (DOL) and Career Junction	Annually	Occupation (2 digit) by sector
	Ratio of vacancies to numbers in occupation (imbalances)	Yes	GHS/QLFS (Stats SA)	Annually	Occupation (2 digit) by sector
	Hard to fill vacancies	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Percentage of new graduates (6 months after completion) employed full-time	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Percentage of new graduates (6 months after completion) not employed	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Mean full-time hours worked by new graduates (6 months after completion) per week	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Mean full-time annual salary of new graduates	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
	Percentage of graduates with education-job match (3 years after completion)	No	WSP/ATR once revised	Annually	Occupation (2 digit) by sector
Number of new visas granted as a percentage of new graduates	No	DHA & WSP/ATR once revised	Annually	Occupation (2 digit) by sector	

To Note:

- The Title selected for the envisaged annual report is “The Report on Skills Supply and Demand in South Africa: Trends, Projections and Policy Implications”
- In all sections, a clear organisation/sub-structure will be laid out exploring the various aspects or dimensions, of demand, supply and imbalances as some of the data/indicators used cut across sections.
- The indicators whose data is available (as indicated by “Yes”) will form part of the annual report for the 2015/16 financial year. Other indicators would only be possible in future years as we endeavor to put measures in place through MOUs with relevant department responsible for the provision of data.
- In each of the sections, a clear distinction will be made between ‘current’ and ‘future’ situations. Current will focus on using recent levels and the future analysis will examine trends, projections and forecasts.
- Projections are possible over a 10 year horizon, under alternative “what-if” scenarios and will be projected through the Linked Macro Education Model (LM-EM).
- Given the desire/need to focus on Inequality/Poverty reduction as well as employment and growth, explicit attention will be paid where possible to results by socio-economic group e.g. youth, employment status, ethnicity and gender.
- Analysis on the informal sector will be considered in subsequent annual report as we seek to put measures in place to collect data from this sector.
- The framework will be adjusted as work on the actual annual report on skills supply and demand commences.
- Analysis based on geographical disaggregation (e.g. rural vs. urban) will be conducted subject to availability of data.

REFERENCES

- Department of Higher Education and Training (2012). White Paper for Post-School Education and Training. Pretoria: DHET.
- Human Resource Development Council of SA. 2009. Human Resource Development Strategy for South Africa (2010 – 2030). HRDCSA: Pretoria.