Analytical and Conceptual Alignment of Skills, Jobs, Occupations, Knowledge and Work to Post School Education and Training Policies

REPORT

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https://economictimes.indiatimes.com/jobs/it-professionals-can-increase-salaries-through-upskilling/articleshow/58806012.cms?from=mdr

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Contents

Acronyms

4IR	Fourth Industrial Revolution
APP	Annual Performance Plans
BANKSETA	Banking Sector Education and Training Authority
CEDEFOP	European Centre for the Development of Vocational Training
CET	Community Education and Training
CHE	Council for Higher Education
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
GDP	Gross Domestic Product
GENFETQA	General and Further Education and Training Quality Assurance
HEQSF	Higher Education Quality Sub-Framework
HRDC	Human Resources Development Council
HRDS	Huan Resources Development Strategy
HSRC	Human Sciences Research Council
HTFV	Hard to fill vacancies
ILO	International Labour Organisation
ISCO	International Standard Classification of Occupations
LMIP	Labour Market Intelligence Project
NDP	National Development Plan
NQF	National Qualifications Framework
NSDP	National Skills Development Plan
NSDS	National Skills Development Strategy
NSA	National Skills Authority
NSF	National Skills Fund
OFO	Organizing Framework for Occupations
OIHD	Occupations in High Demand
PALC	Public Adult Learning Centres
PSET	Post-School Education and Training
PIVOTAL	Professional, Vocational, Technical and Academic Learning
QC	Quality Councils
RPL	Recognition of Prior Learning
SDA	Skills Development Act
SAQA	South African Qualifications Authority
SETA	Sector Education and Training Authorities
SSP	Sector Skills Plans
TVET	Technical, Vocational and Education Training
UoT	Universities of Technology
WEF	World Economic Forum
WP-PSET	White Paper on Post School Education and Training

1. Introduction

BANKSETA has commissioned a series of research within the banking sector under the appointment of a Research Chair: Skills and Occupations, at the Researching Education and Learning Centre at the University of Witwatersrand focusing on the following areas:

A) Mapping jobs to occupations: Organising Framework for Occupations; and the development of an open access electronic mapping tool.
B) Investigating drivers of occupational change within a just transition framing: Digitisation and Sustainability
C) Unpacking the structural dynamics and use of occupational frameworks: An international collaboration
D) Analytical and conceptual alignment, gaps and system use in relation to Skills, Knowledge, Occupation, work and employment and Work
E) Lessons for the Post School Sector: Occupations and Skills

Since democracy, skills development has become an important aspect of human resource development with the goal of overcoming inequities and increasing access for all South Africans. It is almost two decades since the Skill Development Act was implemented and over this period it has developed a language of its own with many acronyms and jargon. Ong Hai Liaw (2013, p3) provides the following clarification "Practically every conceivable science, profession, trade, and occupation has its own set of words, some of which are considered to be slang and others technical, depending on the status of the people using these "in" words. Such words are sometimes called jargon".

Terminology used in skills development are vast and one could create a dictionary of the acronyms, jargon and concepts that constitute the skills development language. For this report, the concepts of skills, knowledge, occupations, work and employment are selected for the analysis. These concepts often hold different meaning in varying contexts (national, sectoral, firm and individual) and tend to often be confusing and ambiguous. This report analyses the various meaning and contextual uses of these terms by various philosophers, economists, sociologists and perhaps even politicians at an international level mostly within their use in literature. But is this sufficient? It is important to bring the analysis into the South African landscape by examining how these concepts are used within current policy.

Included in this policy analysis are the White Paper on Post School Education and Training (WP-PSET), the National Skills Development Plan (NSDP), the National Qualifications Framework (NQF) with its three sub-qualifications framework and Skills Planning. It is hoped that this policy research will provide a better understanding of skills development policies and

improve conversations leading to greater clarity and understanding within skills development debates. If policy is well understood and articulated, implementation is easier since there is precision on knowing what needs to be done.

The purpose of this report is to:

- interrogate the meaning of several concepts relating to skills development, through engagement with the literature
- analyse the alignment of these concepts to the selected policies; and
- determine what policy lessons can be learnt from this analysis

Skills development has a direct relationship to human capital development with relevance to the education and training of the current and future labour force. It forms part of the PSET system under the jurisdiction of the Department of Higher Education. By post school education and training institutions we refer to all the Universities and Universities of Technologies (UOT), Technical Vocational Education and Training (TVET) and Community Education and Training (CET) Colleges including public and private institutions. Human capital development also refers to the value that formal qualifications hold in the labour market as well as the occupational learning interventions. Occupational qualifications, skills programmes and workplace-based learning are intended to provide a more equal access to employment and to improve the skills of the current labour force.

The analysis is laid out in four sections. The first section pertains to how skills, knowledge, job, occupations, and work are used in literature at an international level. An investigation of literature shows that these concepts cannot be neatly placed into clearly defined compartments but often have overlapping meaning and are used contextually. The second part analyses post school education and training policy specifically those policies that are current. The third part interrogates the alignment or misalignment between the international meaning of the concepts and their application within the policy environment. The final section provides insights at providing policy recommendations relating to the concepts that have been analysed with the view analysing the relevance of the concepts as they are used within the skills development landscape.

2. Literature on Concepts

The term 'skills development' originates from the Skills Development Act 97 of 1998. The Act was created in the post-apartheid democratic South Africa "to provide an institutional framework to devise and implement national, sector and workplace strategies to develop and improve the skills of the South African workforce". The foundational purpose of skills development is the efforts to balance the supply of and demand for skills bringing the post-school education and training outputs to match the occupational demands of the human capital requirements of industry.

The concepts of skill, knowledge, jobs, occupations and work are embedded in the implementation of skills development. However, their use is not always clear. This section focuses on interrogating the definitions and meaning of these concepts as they relate to skills development, education and training and the labour market. These concepts are often ambiguous and confusing and holds different meaning in varying contexts.

2.1 Skills

Reddy, et al (2018, p20) explain that the definition of skills in relevant literature propose a number of useful conceptual distinctions as laid out below:

- A skill or set of skills can be seen as a **competence** that an individual hold or an **attribute** of a collective group of people who exercise skills in their workplace interactions.
- Skills can be formally recognised in terms of **formal qualifications. I**n informal labour contexts and with respect to workers who are not in a formally recognised category of skilled labour, there is often a high degree of skilful interactions. Informal skills may become formally recognised by means of processes such as the recognition of prior learning (RPL).
- Skills are the result of **formal, non-formal and informal learning**.
    - Formal skills development is that which leads to formal qualifications
    - Non-formal skills development refers to planned educational interventions that are not intended to lead to formal qualifications (or parts thereof).
    - Informal learning occurs in all kinds of daily activities (at work, in family or community life, or leisure) and includes incidental learning.
- The definition of what are core or foundational skills, intermediate and high-level skills, scarce skills, and so forth, is eminently **contextual**.

Categorising skills in this manner must be relevant to, and applicable in, local as well as national socio-economic contexts (especially the local economy and labour markets), and is also a function of policy priorities and definitions contained in relevant regulatory frameworks.

Other authors provide the following explanations to the concept of skills:

- Clark and Winch (2006, p258): skill is the "**physical and mental dexterity** of an individual in performing a task in the work process. It is neither associated directly with an occupation or industry, nor with the potential of the labour concerned".
- World Economic Forum (2016; p54): skill is "used to refer to the **work-related capabilities** of people to perform a job successfully". They distinguish skill from abilities, by defining abilities as that which "refers to more fundamental and enduring attributes of an individual, such as physical or cognitive abilities that are formed over a longer period".
- Bolisani & Bratianu (2018): skills mean "**knowledge about how to do something (know-how)**. It is based on experiential, action-oriented knowledge obtained by performing repeatedly a certain task and learning by doing it". For example, we don't learn swimming by reading in a book about objects floating but by doing it with the whole body and reflecting upon it to improve co-ordination between breathing and moving our arms to stay afloat.
- Green (2011): skill is "**productive, expandable and social**. Skill has productive value; it is enhanced by training and development; and it is socially determined".
- Allais (2011, p3): in South Africa the term skills "is frequently used to refer to the training that happens under the Sector Education and Training Authorities (SETAs) and the National Skills Fund (NSF)".
- Winterton, et al (2005, p7): skill is **goal-directed, well-organised behaviour** that is acquired through practice and performed with economy of effort".

From the above definitions, we can learn that skill develops over time, with practice; it is goal-directed in response to some demand in the external environment; it is acquired when components of behaviour are structured into coherent patterns; and cognitive demands are reduced as skill develops.

Grant (2016) organizes skills into the following categories:

- **Essential**—skills that provide a foundation for work and lifelong learning (e.g., reading, writing, document use, numeracy, computer use, thinking, oral communication);
- **Employable**—skills needed to enter, remain at, and progress in work (e.g., personal management skills, adaptability, working with others, having a positive attitude).
- **Knowledge**—awareness and understanding of information, facts, and ideas—often specific to a field of expertise;

- **Technique**—skills related to doing specific tasks (e.g., driving a truck, creating software, drawing, pipefitting, and maintaining an aircraft).

The **level of skill** relates to the **level of complexity**. The higher the level of skill required, the greater the level of complexity. This is an important attribute of skill that is relevant to the debate on high and low skills. In general terms, reference is made to low skills, intermediate skills and high skills. Green (2011, p8) asserts that the concept of skill has a direct relationship with the complexity of the tasks to be performed stating that "to exercise greater skill is to carry out a more complex activity. Workers can acquire the ability to do complex tasks, with greater complexity needing more learning and requiring greater reward". Therefore, the level of skill is directly correlated to the level of complexity. It is commonly expected that at an individual level, higher skills levels translate to better job prospects and higher earnings.

Grant (2016, p12) posits that "skills are **developed throughout life by multiple influences**—including family, friends, community, formal and informal education and training, work experience, and mentorship". Skill can be learned through formal training courses especially via demonstrations and simulations, or in informal contexts by watching someone carrying out a task or through coaching and mentoring processes in the workplace. Through repetition and continuous application, one can master a skill. Clearly, personality traits, innate intelligence, and natural tendencies play a role and help to explain why some people are motivated to master certain skills and their choice of skills to master. Not everyone can master any skill. For example, people who are naturally analytical are more likely to master the techniques of mathematics to solve problems, whereas those who enjoy the arts will be inclined to develop literacy skills.

Skills shortages/gaps occur when employers are unable to fill vacancies, or experience considerable difficulties in filling vacancies, due to the demand for workers in certain occupations being greater than the supply of workers who are available and willing to work under existing work and employment conditions. **Skills gaps** exist when employers hire workers who do not possess the required qualifications, skills or experience to perform tasks at a particular occupational level or when existing employees are perceived to be underqualified or under-skilled. This may be due to workers not being adequately trained or qualified to perform tasks or because they may not have upskilled to match the emerging skill requirements. Skills shortages arise when employers are unable to recruit staff with the required skills in the labour market and at the going rate for pay and working conditions due to a lack of an adequately skilled workforce (OECD, 2016:29). Green (2011, p23) posits that a skills shortage is a mismatch phenomenon that applies to the employer: "it describes the situation where a job vacancy is hard to fill because applicants lack needed skills".

Skills surpluses are characterised by a relatively high supply and low demand for a given skill. They can be identified by high unemployment (OECD, 2016:29). Skill gaps measure the extent to which workers lack the skills necessary to perform their current job. Generally speaking, skill gaps are usually measured by collecting information from the employer on the perceived skill deficiencies of workers (ILO, 2017).

According to the OECD (2016), the indicators measuring skill shortage and surplus are constructed on the basis of signals extracted from five sub-indices:

- wage growth,
- employment growth,
- hours worked growth
- unemployment rate,
- under-qualification growth

A distinction is drawn between skills shortages in the internal labour market – which relate to workers possessing fewer skills than those required by a firm – and skills shortages in the external labour market, which are related to recruitment difficulties.

Skills are developed through practice, through a combination of sensory input and output. As an example, social skills are developed through interaction with people by observing, listening, and speaking with them. Skills are acquired by **practical application of knowledge**. They refer to the ability to apply knowledge to specific situations. This leads to the question: what is knowledge?

2.2 Knowledge

A distinction is often made between general knowledge, which is fundamental to basic life knowledge, and knowledge that is specific to a sector or occupations and only likely to be encountered in the workplace. Both general and occupationally specific knowledge play a key role in the workplace when converted into useful information that can be applied in the production process. Friedson (2001; p9) makes the claim that "**all work presupposes knowledge, that it is the practice of knowledge** and that the social and economic organization of practice plays a critical role in determining both what knowledge can be employed in work and how that knowledge can be exercised".

Below we examine the concept of knowledge, types of knowledge, organisation of knowledge and its distribution.

Epistemology was developed as a theory of knowledge, trying to answer the fundamental question: What is knowledge? No clear definition has emerged leaving the concept as an abstract but powerful one as it remains central to the economic and social domain of all human interaction.

Philosophically, knowledge is defined as "justified true belief". Bolisani and Bratianu (2018, p6) suggest that knowledge is a "justified true belief" if it incorporates the following three conditions:

- *The truth condition*: the proposition one claims to know is true. If the proposition is not true, then that person does not know what he/she claims to know. The truth condition makes the difference between opinion and knowledge.
- *The belief condition*: that condition demands that if one knows a proposition then he/she believes that proposition.
- *The justification condition*: that condition requires a procedure of justifying that the belief one holds is true.

Knowledge can be distinguished according to types:

Bolisani & Bratianu (2018, p9) describe "**experiential knowledge** which is what we get from the direct connection with the environment, through our sensory system, and then it is processed by the brain". They use the example of snow and states that "if we want to know what snow is then we must go where there is snow and touch it, smell it, taste it and play with it". To truly know what snow is, cannot be obtained from books or pictures. For people who have not actually used their sensual experiences with the concept of snow, their knowledge will remain purely theoretical. They lack the experiential knowledge about snow. Experiential knowledge is unique to the individual as it is contextual and reflective since reflecting upon an experience means actually integrating it against previous similar experiences and knowledge structures, if they do exist. Within the skills development framework, especially with the transition of graduates and the youth into employment, experiential knowledge is integral to their preparation for the world of work. This view is however contested. Young (2006; p115) argues that while all jobs require context-specific knowledge, "many jobs also require knowledge involving theoretical ideas shared by a community of specialists located within the disciplines". This takes on added importance because the increasing complexity of technology, work and society means that the knowledge demands of most occupations have increased. Occupational progression is strongly related to educational progression because education is the main way in which most people are provided with access to theoretical knowledge. This brings us to the second type of knowledge which is propositional knowledge.

Pritchard (2014, p14) discusses **propositional knowledge.** A proposition is what is asserted by a sentence which says that something is the case. "We can distinguish between knowledge of propositions, or propositional knowledge, and know-how, or ability knowledge". Propositional knowledge is also referred to as theoretical knowledge (or knowledge that) and demands a great degree of intellectual sophistication on the part of the knower. In order to have knowledge of a proposition, that proposition must be true, and one must believe it. One way of accounting for the value of knowledge is to note that if you know a proposition, then you have a true belief of that proposition, and true beliefs are clearly useful, and therefore valuable. But not all true beliefs are instrumentally valuable. For one thing, some true beliefs are so trivial that it seems that they have no value at all. Another suggestion is, that *some* knowledge is of non-instrumental value (i.e. is valuable for its own sake).

The third type of knowledge is procedural. Kogut and Zander (1992) argue that the process by which knowledge is used in organisations is at the heart of business performance and value creation. **Procedural knowledge** is the understanding of how something is done, the series of steps or actions taken to accomplish a goal. Some procedural knowledge is domain-specific, some is transferable across domains. Procedural knowledge about frameworks, such as systems thinking and design thinking, helps students develop thought patterns and structured processes that can enable them to identify and solve problems. Some procedural knowledge is domain-specific, such as that in mathematics, while other kinds of procedural knowledge are transferrable across different domains. (ILO, 2019, p11). **Procedural knowledge** is required in performing a task in accordance with a given procedure. Within the work environment, most tasks must be carried out by following a specific procedure. This is especially true with technological advancement and complexity. If one step in the procedure is left out or carried out incorrectly, the task may fail or not produce the correct output or result. Take for instance, the work performed by artisans in any trade. A welder must know the various procedures to carry out different types of welding or a bricklayer must know the different ways to build different types of walls.

Any of the above three knowledge types can take one of two forms- explicit or implicit. Dombrowski et al. (2013; p. 44) provides clarity between **explicit knowledge and implicit knowledge**. Explicit knowledge is easier to pass along because it's written down and accessible. When data is processed, organized, structured, and interpreted, it forms an explicit body of knowledge. Explicit knowledge is recorded, communicated, and most importantly in the world of knowledge management, stored and coded and classified. Explicit knowledge is something we learn in schools, from reading or listening to speakers at a conference. The application of explicit knowledge can be explicit but it can also be implicit. Best practices and skills that are transferable from one task to another are examples of implicit knowledge, and they consist of a combination of experiential, propositional and procedural knowledge. For example, in the structure of artisan training, the learner first acquires theoretical knowledge. Over time and with more experience, this knowledge

becomes implicit when it is applied into practical activities of the trade, that is, where the artisan learns to apply the knowledge gained in actually performing specific tasks.

The three types of knowledge (experiential, propositional and procedural knowledge) are organised in two structures (singular and multiple):

Singular organisation refers to disciplinary structure of knowledge. Disciplinary knowledge contains subject-specific concepts and detailed content of what students learn in specific disciplines. As students acquire disciplinary knowledge, they also become able to connect knowledge across different disciplines (interdisciplinary knowledge, see below), they learn how this knowledge is applied in different situations by practitioners (epistemic knowledge), and they learn about different processes and methods for using this knowledge (procedural knowledge). Thus, disciplinary knowledge is the foundation of the conceptual structure leading to understanding and expertise. When students learn a basic level of disciplinary knowledge, they are able to develop this knowledge further into specialised knowledge or to create new knowledge (OECD, 2019, p6)

Interdisciplinary knowledge involves relating the concepts and content of one discipline/subject to the concepts and content of other disciplines/subjects. Since disciplines influence each other, knowledge is interconnected reflecting the complexities of the world in which we live. In an effort to avoid curriculum overload, some countries provide opportunities for students to explore inter-disciplinary issues/phenomena/themes by embedding them into existing curricula instead of creating new subjects. Interdisciplinary learning can be organised and facilitated by **combining related subjects or creating new subjects**. Creating space in the curriculum for **project-based learning** can facilitate interdisciplinary studies as students need to combine knowledge from different disciplines to work on complex topics. Interdisciplinary knowledge can help students transfer knowledge from one setting to another. (ILO, 2019, p7)

Knowledge and innovation: Roper & Love (2018, p12) clarify the link between **innovation** and the commercialisation of new knowledge or technology. There are three main types of mechanisms through which firms may access, absorb and use external knowledge which may influence their innovation activity. First, firms may form deliberate, purposive relationships with other firms or organisations as a means of acquiring or accessing new knowledge. Second, firms might acquire knowledge deliberately but without the direct engagement of another party. Examples of this type of mechanism include imitation, reverse engineering or participation in network or knowledge dissemination events. Third, firms may acquire knowledge vicariously and unintentionally through informal spill-over mechanisms such as social contacts between employees and those in other firms, media publicity or demonstration effects, or through the mobility of labour between enterprises.

2.3 Occupations

Guile and Unwin (2019; p33) provide three reasons for using the construct of occupation within labour markets:

- first, entry to many areas of the labour market is through an occupational structure;
- second, individuals relate to the notion of belonging to an occupational community and
- third, many people still work in occupationally bounded roles.

The followings are some definition of the concept of occupations:

- Guile and Unwin (2019; p87) explain that an occupation is different from a job as it is "a much more **general and all-encompassing term for employment** which individuals are engaged, and it is not restricted to a particular employer or workplace. Occupation is **aligned to the idea of vocation** and is applicable across the socially constructed hierarchies of occupations or professions". This implies that many **jobs can be grouped together to form an occupation**.
- Trakoli (2010, p237) suggests a definition of occupation, "**as the doing of work (paid and unpaid)**, play or activities of daily living within a temporal, physical and sociocultural context that characterizes much of human life".
- Allais (2012, p635) suggests that an occupation "is a formally recognized social category, with **regulative structure concerning qualifications, promotion, and range of knowledge** (theoretical and practical) required".

In South Africa, occupations received much recognition and focus when Department of Higher Education and Training (DHET) gave the concept acknowledgment in the skills planning domain. By creating the Organising Framework for Occupations (OFO) and placing occupations as the central focus of measuring skill imbalances, employers are mandated to align jobs to occupations for workplace skills plans reporting purposes. We return to this in Section 3.3.

Occupational identity is shaped by changing institutional and cultural contexts, the social relations of particular workplace environments and changing labour market conditions and hierarchies. Education is considered a socially acceptable way of ranking people which most employers would find it hard to do without. Wolf (2002, p29) explains that within firms "**employment is signalling as a simple way of ranking, screening and selecting employees**. Employers also pay more to the educated because this guarantees them employees with particular skills; or because the educated tend to be more smarter and to work harder or that hiring by credentials is convenient, legal and unlikely to lead to trouble Employers are generally on the lookout for the most able and intelligent people they can find".

In the previous two sections we explained the core concepts of education – skill and knowledge. In this section we look at aspects which connect the two spheres- the sphere of education and the labour market (more on this see Section 3.3). These aspects include 'occupational classifications' and 'classification standards.

Occupations are recognised and classified. **Occupational classifications:** The International Labour Organization (ILO) defines it as "a tool for organizing all jobs in an establishment, an industry, or a country into clearly defined set of groups according to the tasks and duties undertaken in the jobs". The commonly used classification of occupations is the International Standard Classification of Occupations (ISCO) which maps national classifications into internationally comparable clusters that allow for international comparison. This is the occupational classification system which is covered later in the report.

Occupational classification uses **occupational standards** as 'classifications and definitions of the main jobs that people do' (CEDEFOP 2009, p21). The main feature of occupational standards is the bridging function they perform to link qualifications to the labour market, but definition can be refined by further examining how they perform this function. The rationale for developing occupational standards is the strong assumed link between employment requirements and education when qualifications are related to occupational standards. **Educational standards** 'focus on what people need to learn, how they will learn it, and how the quality and content of learning will be assessed'. In contrast to occupational standards, which are written following the logic of the occupation, educational standards follow a pedagogical logic. As an example, occupational standards may include a list of competences, clustered to follow the main tasks and functions of an occupation: the aim is to deliver a systematic description of the occupation. In contrast, educational standards include a list of competences organised in learning fields or teaching units, following the logic of progressive accumulation of knowledge and skills: the aim is to steer the learning process.

2.4 Jobs and Work

The terms jobs and work are often used as if they have the same meaning. Guy Standing (2009a) draws a distinction between labour (or jobs) and work. He says that 'work' conveys the intimate link between the work we do and how we are seen by society or by ourselves. It also conveys a sense of life narrative – of development and growth. If it is accepted that workers perform social functions and not merely productive tasks, 'labour' or 'job' do not capture the normative dimension of occupation or what work means for individuals' lives. These terms exclude 'pride of craft', a sense of occupational discipline and freedom from the blind following of routine. Work should be seen, he argued, as a set of activities and tasks that

together form a vocation because they evolve from 'traditions and accumulated knowledge' which convey unique combinations of ways of being and norms of practice associated with the occupation.

In broad terms the nature of work refers to the physical, social, technological and environmental requirements of the activities to be carried out by the worker.

In what follows we analyse the notion of work, dimension of quality of work, and economic factors which affect the structure and the composition of work. We use the word 'job' when it appears in the literature we draw on.

Simply stated, work is a **regular activity** that one carries out, and receives remuneration in return. work generally has a title (we commonly refer to is as a **job title**) with a detailed list of the activities/tasks that the individual is required to perform and this is termed 'job description'. A job title may be the same across two companies but the **description** of work may vary. In the workplace, work is generally connected to an employment contract which details the conditions of the work to be carried out. A person can have a full-time work, part-time work or contract work **(see more on work and employment).**

Ghailani et al (2018; p13) explain the relationship between work and tasks and suggest that "jobs are **bundles of tasks** rather than a simple reflection of one kind of task. Even if some tasks are substitutable by machines, this does not imply that the whole job will disappear as many jobs require a combination of tasks and related skills". The different categories of tasks tend to bundle together into particular jobs. Tasks are put into bundles, which are then advertised as jobs, for which workers who have been trained for those bundles must be hired in order for them to be carried out within an organisational structure.

Job profiles which are also called job descriptions and set out details of the functions, duties and responsibilities for a particular job. The profile or description should outline a very general description of the work to be done and should include functions, duties and responsibilities. In addition, other information such as educational requirements and related experience should be outlined and highlighted. One of the main objectives of a good job profile is to assist in the recruiting process. It can be of great assistance to the manager conducting the interview and will assist in determining if the applicant is a good fit for the position.

The OECD (2016, p2) has identified three dimensions for economies to measure the **quality of work**:

1. **Earnings quality**: This is the extent to which the *level* of earnings and other benefits that are received by workers allow them to have good material living standards and personal well-being, and the extent to which the *distribution* of earnings is shared equitably across members of a workforce.

2. **Job security**: This is the relative security of a job, including the probability that the job will be lost and the economic costs incurred to the individual when the job is lost.
3. **Quality of working life**: These are the noneconomic factors that contribute to worker well-being, such as working-time arrangements, physical health and safety, learning and advancement opportunities, autonomy and control to make decisions, and cooperative and positive relationships and communications between the workforce and management.

Di Pietro et al (2007) identified the following aspects of work on which economic globalisation may have an impact which is detailed in the table below. This list is not intended to be exhaustive. It will simply show the diversity and complexity of the issue.

Number of jobs	Economic globalisation may first have an impact on the number of jobs available in the economy, and thus affect key macro-economic variables such as the unemployment rate and the employment-to-population ratio. The issue is made more complex by the fact that the impact can be different at the micro-economic level (establishment, enterprise, economic activity) and at the macro-economic level (total economy), as well as in the short/long term. Offshoring is a case in point. Closing an enterprise in country A to move it to country B may result in job losses in a particular economic activity of country A. It may also result in job gains for country A as a whole because of higher productivity in the remaining enterprises, higher wages, and higher consumption demand.
Structure of work	Economic globalisation may also affect the structure of work, i.e. their distribution across economic activities. Jobs linked to certain economic activities may tend to disappear whereas jobs linked to other, maybe new activities, are created due to changing competitive advantages and patterns of specialisation. Here again the issue is made more complex by the fact that changes in the structure of work can be caused by economic globalisation but also by technological progress.
Composition of jobs	The composition of jobs, i.e. the mix of skilled and unskilled jobs in the economy, is also likely to be affected by economic globalisation. Low-skilled workers have been most affected by increasing unemployment as a result of technological progress. The demand for high skilled workers in growing in the knowledge economy.
Job earnings	Economic globalisation may affect job earnings in two ways. First, by increasing the overall efficiency of the economy, i.e. its productivity, it causes an increase in real incomes that may be shared with job earnings. Second, by fostering movements of products and

	production factors it may eventually even out price differences between countries, including the price of labour, i.e. job earnings.

Wittenberg and Arrow (2013) explain that "**job creation** occurs in firms that expand employment or in new firms whilst **job destruction** occurs in firms that contract their level of employment or by the death of a firm that closes down". Their study on job creation and destruction reveal that there may be significant job creation occurring in the informal economy but this cannot be measured. However, casual and self-employment, both of which are much more likely to be prevalent in the informal economy are much less stable than regular, formal employment. Informal employment is much less likely to be employed six months later, compared to the likelihood that an individual with a formal job is still in a formal job six months later. This suggests that although job creation might be relatively high in the informal economy, job destruction is also higher. Internationally, job creation and destruction rates are higher in smaller firms, although there is mixed evidence as to whether net job creation is higher in small firms. We do find that net job creation rates are higher in larger firms.

2.5 Work and Employment

Work and employment have both an economic and social contextual meaning. According to Benner (2002) work refers to "**the actual nature of the activities people performs** whilst engaged in the process of production" whilst employment refers to "**the nature of the relationship with the employer** and the nature of compensation provided for the activities performed by the worker".

The conditions of employment refer to the contractual and social conditions of the employee-employer relationship including issues such as remuneration, working conditions, job security and job stability. In terms of the employee-employer relationship, work is what the employee does including all the activities he/she carries out to perform their duties using their knowledge and skills. Employment includes all aspects that cover the conditions that bind the relationship between the employee and the employer.

If an individual is asked to carry out different activities with the same employer under the same conditions as agreed with previously, we can say that his work has changed but his employment is the same. This means that he now does a range of different tasks/activities but his conditions of employment including remuneration, hours of work, place of work, etc remains unchanged.

Work can be paid or unpaid. For example, people work at home or people work as volunteers and in these instances they do not get paid. There are also individuals who work in family businesses and do not receive a salary. Therefore, not all work is remunerated.

W**ork is hired in the formal and informal economy**. The "formal economy" is regulated by the government and includes employment where workers are hired on contracts of employment and earn a salary. Their employment must comply with the labour laws of the country. The "informal economy" is the unregulated part of a country's economy. Here, although the work effort may be rewarded financially, it is not structured and does not comply with the relevant labour law requirements and is not factored into the gross domestic product (GDP) of the country.

The employment relationship is viewed differently from the employer-employee perspective. Whilst the employer is interested in the skills of the employee only as long as it can add economic value to the organisation, the employee is focused on long term employment. This implies that the employee has to always ensure relevance in the organisation and that his/her skills is still needed in the business.

From an economic perspective, unemployment is the flip side of employment. **Unemployment refers to the active working population who cannot find formal employment**; that is, they cannot find work for which they can be adequately remunerated. Research undertaken by the HRDC (2013, p10) reveals that there is a concern in South Africa (SA) about the economy and its ability to achieve the inclusive growth that will enable serious reductions in unemployment and poverty. The general views are that "**Education and skills levels are a key enabler of economic growth as highly skilled people can create jobs and suitably skilled people can be absorbed into employment**".

Currently, the South African labour market is characterised by **low levels of education and skills**. Many of those leaving formal education do so without adequate foundational education. Those entering the labour market with acceptable levels of qualifications acquired either through the academic institutions or the TVET Colleges are viewed by employers as not being adequately prepared for the world of work. The cause of this problem is twofold. The HRDC (2013, p10) further reports that the first cause is that problems within the schooling system results in a low foundational education base and the second is that the skills system is not performing well since it is not producing the skills required by industry. This indicates a skills mismatch between the demand and supply of skills; effective skills planning is therefore imperative if this mismatch is to be addressed.

Permanent and temporary employment. In recent years, job stability and job security debates have been on the increase and terms like the platform worker, the precariat, flexible work and others are emerging. The **standard employment contract seems to be slowly disappearing** where workers who engaged in set working hours at the place designated by the employer. This is changing to working away from the designated place of employment

and working flexible hours with flexible working contracts. Non-standard forms of employment are growing which raises challenges on the social protection of employees as the current labour laws do not address the needs of these new forms. This is an area that Trade Unions must investigate and play a meaningful role in protecting the rights of all workers not only those in standard forms of employment.

According to the OECD (2019, p16,) "**access to social protection can be difficult for all workers in non-standard employment**". In South Africa the self-employed are not covered by any social protection provisions. For small emerging business owners who do not earn enough to draw a salary, this becomes a problem for the self-employed who have little control over their remuneration and working conditions.

Another term that relates to work and employment is **employability**. SETAs often relate this term to unemployed learner interventions and describe the outcome of the training as making these learners more employable. According to Wedekind (2016, p2), the concept of employability remains a contested term and is differently understood and utilised by various stakeholders. **Being employable at its simplest refers to "the degree to which one can become employed**". It is always a relative term as it has to be linked to a specific occupation or job. An individual may be employable in one kind of job, or at a particular level within an occupation, but not at other levels or in other jobs. "Employability is therefore contextual and relative to specific jobs, occupations and economic sectors. Employability is therefore dependent on a complex mix of qualifications, skills and personal traits that varies from individual to individual and is relevant to the sectoral needs". Thus, there can never be a generic form of employability.

Burchell et al (2014) provides **seven dimensions of the quality of employment** as the following:

- Safety and ethics
- Income and benefits from employment
- Working hours and work-life balance
- Security of employment and social protection
- Social dialogue
- Skills development and training
- Workplace relations and motivation

3. Post School Education and Training System

The world of work and the world of learning are on different ends of the spectrum despite the many attempts within the skills development models to incorporate workplace learning into education and training. Most training interventions are classroom-based and academic, while the world of work is dominated by the practical demands of the work process. Bringing learning into the work environment has been challenging with many barriers to overcome within the South African Skills Development landscape.

The PSET or post–school system comprises "all education and training provision for those who have completed school, those who did not complete their schooling, and those who never attended school" (DHET, 2013). It caters for the training needs of individuals after schooling and hence the term post-school. It is the vision of the DHET to lead post–school education and training, by providing a co-ordinated and integrated system with different streams and options to cater for the learning needs of the labour market.

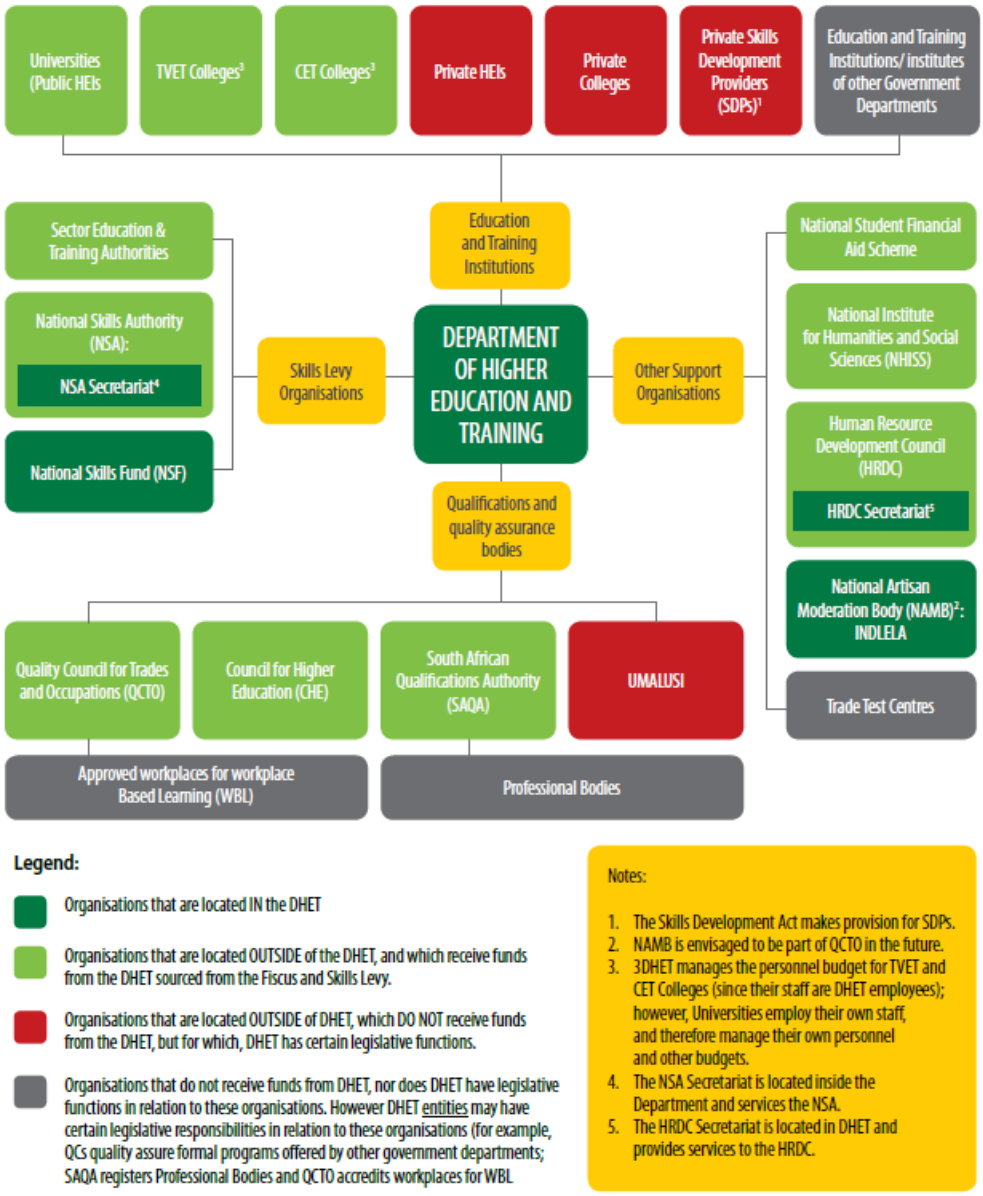
The PSET system comprises institutions of learning, funding institutions, quality assurance mechanisms and other support structures. The four institutions of learning are the universities, universities of technology, TVET colleges and CET Colleges. They include both public and private training providers. As per the PSET Monitor 2018, there are currently 26 public universities comprising of 11 traditional universities, 6 Universities of Technology (UoT) and 9 comprehensive universities. The difference between these categories of universities lies in their programme offerings.

The TVET colleges, previously referred to as Further Education and Training (FET) colleges, provide education opportunities that are vocational or occupational by nature, implying that students receive the education and training necessary to develop skills towards a specific range of occupations, employment or entrepreneurship. The aim is that skills taught would have direct application in the workplace. The PSET Monitor (2018) reports 50 TVET colleges, with over 260 campuses. There are also a number of private colleges which offer occupational based training.

CET colleges is a new type of institution which is intended to cater mainly for youth and adults who did not complete their schooling or who never attended school and thus do not qualify to study at colleges and universities. These institutions were created through changing the focus of the former ABET colleges, which were largely focused on literacy and numeracy skills for adults.

The Skills Levy Institutions include the National Skills Fund, the National Skills Authority and SETAs. The NSF is mandated to enable the country to drive major skills strategies and enhance skills development and training of the unemployed. The National Skills Authority (NSA) advises the Minister of Higher Education and Training on national skills development policy and fulfils a monitoring and evaluation role of the SETAs. SETAs were established for each economic sector as part of the implementation of the National Skills Development Strategy (NSDS) and to develop the skills needed by employers. Each SETA has the mandate to co-ordinate skills development in its allocated sector, ensure that employees acquire the skills needed by employers, and ensure that training takes place in accordance with standards within the NQF. In this process, SETAs develop and implement five-year Sector Skills Plans (SSPs), Strategic Plan (SP) and Annual Performance Plan (APP). The Skills Development Levies Act obligates employers to pay 1% of the total amount of remuneration paid to employees as a skills development levy. This levy is distributed to SETAs and the NSF and utilised for various skills development interventions.

There are four quality assurance bodies comprising the SAQA, QCTO, CHE, and Umalusi. SAQA is tasked with overall responsibility for the implementation of the NQF. Three sub-frameworks are responsible for different aspects of the NQF – the General and Further Education and Training Qualifications Sub-framework; the Higher Education Qualifications Sub-framework; and the Trades and Occupations Qualifications Sub-framework.



Reproduced from the PSET Monitor Report (2018)

3.1 The Policy framework of the PSET system

Since 1994, there have been several policy initiatives on skills development that have been pursued by the democratic government. Between 1994 and 2009, the PSET system was split between the Department of Education and the Department of Labour. Whilst academic education remained the imperative of the Department of Education, skills development was placed under the control of the Department of Labour (DoL). However, the PSET system aimed at creating an education and training system that focused on promoting equitable access to education. The system aimed at creating multiple entry points into education and training with the key notable change being the introduction of occupational programmes

registered and accredited by the SETA ETQAs. This was to create an avenue for workplace-based learning to filter into the education and training pipeline.

The Reconstruction and Development Programme (RDP) was conceptualised to steer South Africa through the 1994 transition into a democratic society. The policy identified the development of human resources as one of its main policy programmes. In terms of skills development, the policy proposed the development of an **integrated system of education and training** to produce knowledge and skills for industry and its citizens to develop their cultures, society and the economy.

The Growth, Employment and Redistribution (GEAR) strategy was enacted by the democratic government in 1996. In terms of skills development, GEAR was aimed at improving productivity by encouraging **upgrading of skills in both the formal and informal sectors**. It attempted to create a balance between the long-term strategy for skills development and creation of short-term labour-intensive employment prospects for the unemployed and the expansion of a low-skills formal economy to absorb unemployed workers.

In 1995, the Labour Relations Act (LRA) was enacted to protect labour rights; while the South African
Qualifications Authority Act 58 of 1995 (SAQA Act) was passed in order to develop the National Qualifications Framework (NQF). The Skills Development Act, 1998 (SDA) and Skills Development Levies Act 9 of 1999 (SDLA) were also enacted. These 4 pieces of legislation was created to provide the foundation for education and work in South Africa.

In 2006 the Joint Initiative for Priority Skills Acquisition (JIPSA) was developed to support the policy priorities and objectives set out in Accelerated and Shared Growth Initiative for South Africa (ASGISA). ASGISA identified a shortage of suitably skilled labour as one of the six major constraints on accelerated and shared growth. Several medium and long-term interventions were then identified to address skills shortage. JIPSA identified primary skills shortages, regarded as priority skills, and provided advice on alignment of the training and skills development efforts of both public and private sectors to efficiently address the shortage of suitably skilled labour. A major outcome of the ASGISA and JIPSA initiatives was the foregrounding of strategies and frameworks for the promotion, expansion and regulation of artisan training. In harmony with this policy development, the Further Education and Training Colleges Act (Act No. 16 of 2006) was passed in 2006.

The Human Resources Development Strategy for South Africa (HRDS) aims to align and coordinate human resource development. The first HRDS was launched in 2001 with the title "Human Resources Development Strategy for South Africa: A nation at work for a better life for all". The second HRDS was launched in 2009 with the title "Human Resources Strategy for South Africa 2010-2030".

The NSDS was developed as a subordinate strategy to the HRDS and an overarching strategic instrument for skills development. It provides the basis from which the NSF and the SETAs to discharges their responsibilities. The NSDS broadly aims to equip the nation with skills needed for economic growth, social development and sustainable employment growth. The NSDS was released in three phases. The NSDS I for the period 2001-2005 focused on equality and the need to cultivate lifelong learning in the workplace setting. The NSDS II covered the period 2005-2010 with a focus on equity, quality training and skills development in the workplace. Following its establishment, DHET published the third NSDS in 2011. The stated goals of the NSDS III were to improve effectiveness and efficiency in skills development with a particular focus on promoting career development and sustainable employment. The strategy proposed increased access to occupationally–directed programmes to ensure a continuous upgrading of skills in the workforce, and promoting growth of the public TVET system. It further proposed a greater emphasis on improving the low level of literacy and numeracy skills among youth and adults and encouraged support for training initiatives by co-operatives, small enterprises, NGOs and the community.

In 2009 the single Department of Education was split into DHET and the DBE. DHET became responsible for all functions pertaining to higher education, further education and training, as well as adult education and training. The main focus of DHET is to build a co-ordinated system of post-school education and training ensuring that the supply of skills meets the current and future labour market demands.

The 2010 New Growth Path (NGP) stresses the importance of the creation of decent work opportunities. It further supports more labour-absorbing activities through improvement of skills in every job. The strategy sets quantitative targets to meet skill shortfalls in important economic sectors and emphasizes the central role of SETAs in the successful implementation of effective skills development initiatives. Since most labour-absorbing jobs are low-skilled in nature, while a substantial section of the South African labour force is low skilled, the strategy asserts that an increase in labour-absorbing jobs can serve as an effective tool to alleviate unemployment.

The NDP was launched in 2012 and provides as a long-term strategic development plan for South Africa. The NDP identifies the improvement of the quality of skills as critical to the achievement of its objectives. The plan sets out South Africa's economic priorities and identifies actions that must collaboratively be taken by government, private sector and labour to address job and economic challenges. Emphasis is placed on understanding the supply of and demand for skills.

In 2013 DHET published the White Paper for Post–School Education and Training (WP-PSET). The purpose of the WP was to set out the priorities of the Department and outline strategies

to achieve them. The WP elevated TVET colleges as its highest priority. It also proposed the establishment of CET colleges to replace the existing public adult learning centres (see more below). The priority for universities was to articulate clear differentiation across university types as well as between the university subsector and other PSET institutions with the goal of improving quality within universities.

In 2016, as the NSDS III was reaching its end, DHET looked at re-shaping the PSET system towards "a vision for an integrated system of post-school education and training, with all institutions playing their role as parts of a coherent but differentiated whole" (DHET, 2013). Many guideline documents and draft policies were released for comment and input. In 2019, DHET finalised its vision for the skills development system and released the National Skills Development Plan, which lays out the skills development roadmap for South Africa until 2030. As opposed to the previous NSDS, the NSDP is a policy document with a specific focus on occupations in high demand and priority skills to support economic growth, employment creation and social development. It is hoped that DHET will soon finalise and release the National Policy for the PSET system.

The White Paper on Post School Education and Training

The White Paper on Post School Education and Training (WP-PSET) released in 2013 but implemented from 2016, laid the foundation for the development of an integrated and co-ordinated approach for skills development. The White Paper sets out strategies to improve the capacity of the post-school education and training system to meet South Africa's needs. It outlines policy directions to guide the DHET and the institutions for which it is responsible in order to contribute to building a developmental state with a vibrant democracy and a flourishing economy.

Its main policy objectives are:

a) a post-school system that can assist in building a fair, equitable, non-racial, non-sexist and democratic South Africa;
b) a single, coordinated post-school education and training system;
c) expanded access, improved quality and increased diversity of provision;
d) a stronger and more cooperative relationship between education and training institutions and the workplace;
e) a post-school education and training system that is responsive to the needs of individual citizens, employers in both public and private sectors, as well as broader societal and developmental objectives.

The WP-PSET provides further guidelines on how these policy goals can be achieved. These guidelines provide a deeper understanding of the five goals. Table 1 provides a deeper analysis of the PSET goals and provide clear imperatives to achieve the specified goals.

PSET Goal	Imperatives to achieve the goal
A post-school system that can assist in building a fair, equitable, non-racial, non-sexist and democratic South Africa	• Education provides a route out of poverty for individuals • Education can promote equality of opportunity • Greater social justice through equitable access by all to quality education. • Need to expand access to post-school opportunities • Improve the quality of the entire post-school system improves.
A single, coordinated post-school education and training system	• Greater co-ordination between universities, UoTs, TVET, CET, SETAs, regulatory bodies and private training institutions • Better co-ordination within government departments • Better co-ordination between SETAs and other PSET organisations • Easy articulation between different parts of the PSET system • Better career guidance with clear learning pathways
Expanded access, improved quality and increased diversity of provision	• Expansion of access for the growing population • Affordable education for all • Increase part time studies, distance education and open learning opportunities
A stronger and more cooperative relationship between education and training institutions and the workplace	• Improve the amount and quality of workplace training • Workplace training and work-integrated learning to become essential to training • A combination of both theoretical knowledge and practical experience required • Theory provides knowledge of general principles and laws, which allows additional learning and adaptation to new technologies and circumstances • Practical experience builds applied knowledge and develops self-confidence in someone's ability to act effectively • Training systems, including curricula, need to be designed with employers and education and training provider participation • Expand other forms of on-the-job training, including learnerships and internships in non-artisan fields • SETAs must facilitate workplace learning partnerships between employers and educational institutions

A PSET system that is responsive to the needs of individual citizens, employers in both public and private sectors, as well as broader societal and developmental objectives	• Respond to the needs of the economy and the labour market through imparting skills • The skills development system – including the SETAs, the NSF, the colleges and the universities – must remain keenly aware of the skills challenges facing industry, commerce and government institutions as well as those of individuals in need of skills development, especially the youth • Universities in particular must undertake research, build knowledge-generating partnerships with public and private enterprises, other government departments and other institutions. • Respond to transformational goals

Table 1: Imperatives to achieve the PSET goals

3.2 Key Education Institutions within the PSET system

The White Paper on PSET provides further elaboration of each of the key education institutions. This institutional analysis is provided in the WP-PSET. The guidelines provide direction on ways to improve and strengthen the key education institutions that report to the DHET.

Guidelines for TVET Colleges recommended in the WP-PSET

The DHET's highest priority is to strengthen and expand the public TVET colleges and turn them into attractive institutions of choice for school leavers.

The WP-PSET makes the following recommendations to strengthen the TVET College system:

- Strengthen the colleges by improving their management and governance, developing the quality of teaching and learning, increasing their responsiveness to local labour markets, improving student support services including **placement in jobs**, and developing their infrastructure.
- Strengthen partnerships with employers, both at the system level and that of individual colleges. Such partnerships will assist the colleges to locate opportunities for work-integrated learning, to place students when they complete their studies, and to obtain regular workplace exposure for staff so as to keep them abreast of developments in industry. Employers should also be in a position to advise the college system and individual colleges around issues of curriculum, and experts from industry could teach at colleges on a part-time or occasional basis.
- SETAs need to play an important role in promoting and facilitating links between colleges and employers. **A curriculum that responds to local labour market needs** or that responds to particular requests from SETAs, employers or government to meet specific

development goals will result in a differentiated college system with various niche areas of specialisation.

- **The entire gamut of vocational programmes and qualifications will need to be reviewed and rationalised.** The current mix of programmes and qualifications in the TVET colleges is complex to administer, difficult for learners and parents to understand, and often poorly quality-assured. The review will evaluate what the different qualification types have to offer, how they articulate with other post-school programmes and qualifications, what the challenges are, and how the system can be rationalised to be easier to understand, more efficient and user-friendly, in order to meet the **economy's needs for mid-level skills.**
- **Improve career guidance** at college level to ensure that students are able to make appropriate learning pathway and career decisions. This will complement career guidance at school level, as well as that offered through the career guidance initiatives of the DHET and other bodies. DHET has encouraged SETAs to establish satellite offices at TVET colleges to support career development.

Guidelines for Universities recommended in the WP-PSET

The NDP outlines three main functions of universities. First, universities educate and provide people with high-level skills for the labour market. Second, they are the dominant producers of new knowledge, they assess and find new applications for existing knowledge, and they validate knowledge and values through their curricula. Third, they provide opportunities for social mobility and strengthen social justice and democracy, thus helping to overcome the inequities of the past.

The WP-PSET makes the following recommendations to strengthen the University system:

- Develop a diverse university sector which is *purposefully* differentiated
- Focus their attention on improving student performance. Improving student access, success and throughput rates is a challenge for the university environment. **Universities must provide for the education of sufficient numbers of professionals and other graduates in scarce skills areas.** DHET will ensure that priority skills areas are not neglected and that particular priority is placed on producing black professionals and graduates.
- Focus on increasing research and innovation, improving the quality of research, and building on areas of strength identified as important for national development.
- Focus on the need to recruit and retrain academics, ensuring that academic careers are attractive, assisting academics to improve their qualifications, improving conditions of service, and attracting academics from other countries where necessary.
- Seek to build strong partnerships between universities and employers in order to promote the expansion of workplace training opportunities, especially in those areas where qualifications or professional registration depends on practical workplace experience.

Guidelines for Community colleges recommended in the WP-PSET

A new type of institution, the CET, is proposed in the WP-PSET to cater mainly for youth and adults who did not complete their schooling or who never attended school and thus do not qualify to study at TVET colleges and universities. They will be multi-campus institutions which group together a number of existing public adult learning centres (PALCs). They will be provided with adequate infrastructure and full-time staff, and will be expanded by adding new campuses where this is necessitated by increasing enrolments and programmes. Although they will be public colleges, they will be able to enter into partnerships with community-owned or private institutions such as church-run or other education and training centres.

The WP-PSET makes the following recommendations for the inclusion of Community Colleges:

- Community colleges will build on the current offerings of the PALCs in order to expand vocational and skills-development programmes and non-formal programmes. Formal programmes will include the General Education and Training Certificate (GETC) and Senior Certificate programmes currently offered, as well as the proposed new National Senior Certificate for Adults (NASCA) and occupational programmes funded by SETAs or the NSF.
- Community colleges should draw on the strengths of the non-formal sector – particularly its community responsiveness and its focus on citizen and social education – in order to strengthen and expand popular citizen and community education. Community colleges will also link directly with the work of public programmes – such as the Expanded Public Works Programme (EPWP), Community Works Programmes (CWP), and others – **to provide appropriate skills and knowledge**. Such programmes can provide work-integrated learning opportunities, while the colleges provide classroom and workshop-based learning.
- Community colleges will seek to facilitate lifelong learning in communities by enabling the development of skills (including literacy, numeracy and vocational skills) to enhance personal, social, family and employment experiences. They will also seek to assist community organisations and institutions, local government, individuals and local businesses to work together to develop their communities by building on **existing knowledge and skills.**

3.3 The National Skills Development Plan

The National Skills Development Plan (NSDP) is the most recent skills development policy released in 2019 and lays out the skills development roadmap for South Africa until 2030. It replaces the National Skills Development Strategy as an all-encompassing document outlining the role of the PSET system in developing "An Educated, Skilled and Capable Workforce for South Africa". As opposed to being a strategy, the NSDP is a policy document with a specific

focus on occupations in high demand and priority skills to support "economic growth, employment creation and social development".

NSDP (2019, p9) articulates eight outcomes as follows with clearly defined performance indicators:

a) Identify and increase production of occupations in high demand
b) Linking education and the workplace
c) Improving the level of skills in the South African workforce
d) Increase access to occupationally directed programmes
e) Support the growth of the public college institutional type as a key provider of skills required for socio-economic development
f) Skills development support for entrepreneurship and cooperative development
g) Encourage and support worker-initiated training
h) Support career development services

In order to further clarify the eight NSDP goals, explanatory notes are provided in Table 2. These explanatory notes also include actions required to achieve the outcomes as specified.

NSDP Outcome	Explanatory Notes
Identify and increase production of occupations in high demand	• Occupations in high demand (OIHD) improves the responsiveness of the PSET system to the needs of the economy • The national list of occupations in high demand will be compiled and reviewed for every two years • OIHD data to be used in enrolment planning, decision making on the prioritisation of resource allocation, qualification development, and career information and advice • Skills that are required are most frequently expressed in 'occupational' terms • Reason for using the notion of 'occupation' is that 'occupation' is the language used in the demand side, which is the labour market
Linking education and the workplace	• The role of SETAs as intermediary bodies is posited as a key factor in linking the world of work and education. • While there are graduates being produced, the linkage to the workplace and labour market is critical so as to realise the placements of graduates in the labour market to address occupations in high demand and priority occupations. • The SETAs can facilitate and broker the linkages between the labour market, employers and sectors with the education and training institutional supply.
Improving the level of skills in the South African workforce	• SETAs must support the training of employed workers • Encourage employers to expand training in order to improve the overall productivity of the economy

	• Address skills imbalances in the workforce in particular and the labour market in general
Increase access to occupationally directed programmes	• South Africa's intermediate skills base is too low to support the country's socio-economic development goals • The workforce is also not keeping pace with the skills required to remain competitive in an increasingly knowledge-based economy • Quality Council for Trades and Occupations has been developing new occupational qualifications which will become an important part of the offerings in TVET colleges and CET colleges • The new occupational qualifications require some work experience for certification
Support the growth of the public college institutional type as a key provider of skills required for socio-economic development	• Centres of Specialisation will be advocated to be the mode of delivery of identified occupational programmes • This mode of delivery will be encouraged, promoted and expanded in the TVET institutional type as it places the role of the employer at the centre with other stakeholders, such as SETAs. • The role of the social partners remains central to the success of this methodology
Skills development support for entrepreneurship and cooperative development	• The inability of the youth to engage in economic activity and find employment suggests that young people may not be receiving the necessary skills and work experience to drive the economy forward • The challenge of inculcating a culture and spirit of entrepreneurship and self-employment lies in making funding available and in developing the skills and competencies of the youth and potential entrepreneurs. • SETA and NSF will actively support skills development needs of entrepreneurs and cooperatives within their sectors, with particular focus on the unemployed, youth, women and people with disabilities.
Encourage and support worker-initiated training	• Trade unions play an important role in the skilling of workers in broader sectoral policy • Trade unions are able to use the critical networks of their organisations to educate their members and other workers to suit their needs in a manner that is also beneficial to the economy as a whole. • Worker-initiated education and training can contribute to a workforce that is better able to understand the challenges facing the economic sectors in which they operate.
Support career development services	• The skills development system must dedicate the required resources to support career and vocational guidance • Both the SETAs and the NSF respectively must seek to build career guidance initiatives in their sectors.

Table 2: Explanatory notes on the NSDP outcomes

Within the NSDP, nine key principles are explained. These principles underpin the operations of the NSDP and is detailed in table 3.

NSDP Principle	Explanatory Notes
Locating the NSDP within an Integrated PSET System	• Promotes a greater level of integration within the PSET system • Greater co-ordination of planning, funding, monitoring, evaluation and reporting on the system
Contributing to the country's socio-economic development objectives	• Contributes to strategies and priorities of various sectors of the economy • Emphasis on inclusive growth and employment generation as set out in the NDP, the NGP, the IPAP and other key policy documents of government.
Advancing an equitable and integrated system	• Supports the transformational and redress imperatives in SA • Places a strong focus on addressing equity in relation, to class, gender, race, youth, geography and disability. • Seeks to ensure that skills development interventions reach the employed and new entrants to the labour market
Greater inclusivity and collaboration will be promoted	• Collaboration through partnerships within the public sector as well as between the public and private sectors in skills development • A focus on quality education and training provision and articulation between programme and qualification offerings to ensure effective learning to work pathways • A strong focus on workplace-based learning in both the public and private sectors • Partnerships across the skills development system with both public and private providers • Effective and meaningful stakeholder engagement to support ownership and participation among stakeholders including social partners, individuals, employers, labour, providers, prospective learners, and the public
Focusing on support system for learners and employers	• Ensure that prospective learners and the public are aware of when and how to apply for programmes and have access to a simplified process • Improve efficiency and effectiveness of decision-making, planning, allocation of funds, implementation, and quality assurance • Harness the use of technology, where possible and relevant, standardise processes across all skills levy institutions, improve efficiencies and increase stakeholder involvement through on line portals and accurate data analysis for improved decision making • Standardise stipends or allowances paid to learners during their training by skills levy institutions

Strong emphasis on accountability	• Improve the governance oversight and monitoring and evaluation mechanisms and capacity, with strong social partners' involvement • Institute mechanisms to ensure that actions are taken based on findings from these monitoring and evaluation systems. This, with a view to understanding the strengths, challenges and impact of the system • Review the system where evidence suggests that there are obstacles that are preventing the realisation of the agreed upon outcomes. This will ensure that the Minister can act where there is non-performance or maladministration • Introduce mechanisms for instructions to the SETAs by the Minister, where there are challenges • Review the SETA Standard Constitution to strengthen governance and accountability mechanisms
Understanding skills demand	• Central to understanding the skills in demand, will be an analysis of sectoral growth and development plans and labour market information. The analysis will result in an evidence-based understanding of skills and occupations requirements to support economic and social development priorities • Social partners and other interested stakeholders will be actively involved in this process of determining required skills and occupations. Employers will be involved in the planning and the provision of the required skills • Partnerships and collaboration with the higher education and research institutions, amongst others, will be central for evidence-based understanding of skills demand and supply • SETAs will continue to gather credible information from the workplaces to understand the demand for skills and occupations, both nationally and within sectors • Use the analyses to verify occupations, in collaboration with employers and labour, across various groups (managers, professionals, service and clerical workers, artisans, plant and machinery operators and elementary workers) that are in high demand • Research and innovation are a key component of the NSDP.
Steering Supply: Qualifications and Provision	• Quality Councils will ensure the design, development and maintenance of occupational standards and qualifications • Education and training institutional enrolment plans will be aligned to occupational standards and qualifications. This will be coupled with resources to support the improvement of the throughput and quality of these programmes • Skills levy institutions will play an intermediation role in these discussions so as to encourage partnerships between institutions and

	workplaces and, where relevant, between public and private providers. This in turn will support the planning processes undertaken by the skills levy institutions with workplaces linked to occupational learning programmes and workplace-based learning opportunities
Steering Supply: Funding Mechanisms	• Levy funding to be aligned with fiscus funding to ensure support for workplace-based learning, to design and implement workplace-based learning incentives, and to increase enrolment and throughput qualifications • These funding mechanisms will ensure an alignment of funding sources to support the NSDP vision

Table 3: Explanatory notes on the principles of the NSDP

3.4 The NQF and the Three Sub-Qualifications Frameworks

The National Qualifications Framework (NQF) overarches the whole education and training system in South Africa. It was intended to: create an integrated national framework for learning achievements; facilitate access to mobility and progression within education, training and career paths; enhance the quality of education and training; and accelerate the redress of past unfair discrimination in education, training and employment opportunities.

The NQF is a system for the development, classification, registration, publication and articulation of national qualifications. It is a single integrated system which is comprised of three coordinated sub-frameworks for:

- General and Further Education and Training referred to as the General and Further Education and Training Qualifications Sub-Framework (GFETQSF)
- Higher Education referred to as the Higher Education Qualifications Sub-Framework (HEQSF) and
- Trades and Occupations referred to as the Occupations Qualifications Sub-Framework (OQSF).

Whilst Umalusi is tasked with the responsibility of implementing the GFETQSF, CHE is given the responsibility for the HEQSF and QCTO is given the responsibility for the OQSF. The diagram below provides an overall picture of the Qualification types and corresponding NQF levels assigned to the different qualification sub-frameworks.

	NQF Level	Qualification Types		
Higher Education Qualifications Sub-framework under the CHE	10	Doctoral degree / professional	-	Occupational Qualifications Sub-framework under the QCTO
	9	Master's degree / professional	-	
	8	Bachelor of Honours degree / Postgraduate Diploma / Bachelor's degree	Occupational Certificate level 8	
	7	Bachelor's degree / Advanced Diploma	Occupational Certificate level 7	
	6	Diploma / Advanced Certificate	Occupational Certificate level 6	
	5	Higher Certificate	Occupational Certificate level 5	
General and Further Education and Training Sub-framework under Umalusi	4	National Certificate / Grade 12	Occupational Certificate level 4	
	3	Intermediate Certificate / Grade 11	Occupational Certificate level 3	
	2	Elementary Certificate / Grade 10	Occupational Certificate level 2	
	1	General Certificate / Grade 9	Occupational Certificate level 1	

Reproduced from the PSET Monitor Report (2018)

General and Further Education and Training Sub-framework under Umalusi

Umalusi's mandate as a Quality Council is derived from the GENFETQA Act, Act No 58 of 2001, amended in 2008. The GENFETQA Act is provided with the purpose of maintaining norms and standards in general and further education and training and as such its mandate includes the following:

- Developing and maintaining a sub-framework of qualifications for general and further education and training;
- Quality assurance of all exit point assessment of such qualifications;
- Certification of learner achievements;
- Quality promotion amongst education institutions;
- Quality assurance of private adult learning centres and private further education and training colleges; and
- Accreditation of assessment bodies other than departments of education.

In line with the aim of the NQF Act, namely, to develop and manage the GFETQSF, Umalusi has been mandated to-

- develop policy and criteria for the quality assurance and accreditation of private colleges for the offering of qualifications or part-qualifications registered on the GFETQSF with the aim of ensuring compliance with these requirements;
- quality assure all exit point assessment of the qualifications or part-qualifications;
- perform the external moderation of assessment of all assessment bodies;
- certify learner achievements;

- develop policy for the accreditation of assessment bodies other than departments of education; and
- accredit assessment bodies in accordance with the policy.

In order to determine and maintain the standard of qualifications or part-qualifications registered on the GFETQSF, Umalusi as Quality Council must ensure:

- that qualifications or part-qualifications are registered on the GFETQSF
- that private colleges that offer provision towards the achievement of such qualifications or part qualifications are quality assured and accredited to offer the curriculum that supports such qualifications or part-qualifications;
- that assessment bodies and systems that externally examine such qualifications or part-qualifications are accredited to do so and monitored; and
- the conduct of national external examinations for qualifications or part-qualifications on the GFETQSF is monitored and moderated.

In terms of the *NQF Act*, Umalusi is responsible for the following qualifications listed on the GFETQSF-

- National Certificate (Vocational) NC(V);
- Reports 190/191;
- National Senior Certificate for Adults (NASCA);
- General Education and Training Certificate, ABET Level 4;
- General Education and Training Certificate for Adults (GETCA); and
- Future qualifications or part-qualifications registered on the GFETQSF to be offered at private colleges.

The Higher Education Qualification Sub-Framework under the Council for Higher Education (CHE)

The revised Higher Education Qualification Sub-Framework **(**HEQSF), in line with the previous framework, provides the basis for integrating all higher education qualifications into the National Qualifications Framework (NQF). It provides a basis for standards development and quality assurance. It provides a mechanism for improving the coherence of the higher education system and indicates the articulation routes between qualifications, thereby enhancing the flexibility of the system and enabling students to move more efficiently over time from one programme to another as they pursue their academic or professional careers.

The HEQSF is designed to:

- Be sufficiently flexible to accommodate different types of higher education institutions and enable institutions to pursue their own curriculum goals with creativity and innovation;
- Facilitate the education of graduates who will contribute to the social, cultural and economic development of South Africa and participate successfully in the global economy and knowledge society;
- Enhance the development of a vibrant, high quality research system;
- Be compatible with international qualifications frameworks in order to ensure international recognition and comparability of standards;
- Be suitably flexible to accommodate the development of new qualification types and specialisations as the need arises;
- Be simple, clear, easy to understand and user-friendly for the higher education system and its clients;
- Facilitate qualification articulation across the higher education system and assist learners to identify potential progression routes, particularly in the context of lifelong learning; and
- Articulate with the rest of the NQF.

The HEQSF applies to all higher education institutions, both public and private, and to all qualifications that purport to be higher education qualifications.

It regulates and specifies all higher education qualification types, including whole qualifications based on unit standards, in the higher education system and their designators and qualifiers, and the manner in which the qualifications are designed and relate to one another. It does not deal with nor does it prejudice the design and registration of unit standards to meet specific learning outcomes.

The framework has eleven qualification types mapped onto the six levels of the NQF occupied by higher education qualifications. Some levels have more than one qualification type. Some qualification types have specific variants. The framework comprises the following qualification types:

Undergraduate

- Higher Certificate
- Advanced Certificate
- Diploma
- Advanced Diploma
- Bachelor's Degree

Postgraduate

- Postgraduate Diploma
- Bachelor Honours Degree
- Master's Degree
- Professional Master's Degree
- Doctoral Degree
- Professional Doctorate

Occupational Qualifications Sub-Framework under the QCTO

Occupational Qualification' means a qualification associated with a trade, occupation or profession resulting from work-based learning and consisting of knowledge unit standards, practical unit standards and work experience unit standards (1998:8). The term is also now generally used to describe the qualifications that are being developed under the auspices of the Quality Council for Trades and Occupations (QCTO).

The Occupational Qualifications Sub-Framework (OQSF) is designed to:

- facilitate the workplace-based education of post school learners to contribute to the social, cultural and economic development of South Africa;
- provide occupational qualifications that can be credibly benchmarked against similar international occupational qualifications; and
- facilitate as far as possible the articulation between occupational qualifications within the sub-framework, and across the NQF to qualifications developed and managed by other Quality Councils.

The awarding of an occupational qualification indicates that a learner has successfully completed a coherent and purposeful programme of learning at a particular level on the NQF, and that the learner has been assessed as qualified. An occupational qualification is the formal recognition and certification of learning achievement awarded by an accredited skills development provider.

Standards are developed as benchmarks in order to guide the design, implementation and quality assurance of learning programmes that lead to occupational qualifications.

The OQSF sets out the range of occupational qualification types in occupational education that may be awarded to mark the achievement of learning outcomes that have been appropriately assessed.

Every occupational qualification type is linked to descriptors. These descriptors set out specifications for different features of the qualification as follows:

- the total minimum credits required;
- naming conventions related to designators, qualifiers and abbreviations;
- the purpose and characteristics of an occupational qualification type;
- minimum requirements; and
- progression paths into other occupational qualification types.

Occupational qualifications are designed to integrate knowledge, practical skills and workplace learning into the curriculum, through incorporation of Work Integrated Learning (WIL). WIL is an umbrella term that covers the Work Experience component of occupational qualifications. It takes various forms, including simulated learning, work-directed theoretical learning, problem-based learning, project-based learning and work experience (work-based learning). WIL is a structured part of an occupational qualification: the volume of learning allocated to WIL is expected to be appropriate to the purpose of the occupational qualification, and to the cognitive demands of the learning outcomes and assessment criteria contained in the appropriate level descriptor.

The Ministerial Determination allows for only one qualification type on the OQSF, and this is the Occupational Certificate. The QCTO will issue the following categories of certificates:

- Trade Certificates
- Occupational Certificates for occupational qualifications
- Occupational Part Qualifications for occupational qualifications

Skills development in the NQF was structured around 'learning fields' for example, agriculture and nature conservation, physical planning and construction and manufacturing, engineering and technology. A myriad of qualifications was developed in relation to these learning fields, in many cases duplicated across different economic sectors.

The review of the NQF recognised that this skills development framework was less effective and efficient in 'hitting the nail on the head' in terms of skills needed for specific jobs or occupations. In response, attempts were made to more closely link skills development to skills needs in specific jobs and occupations. This demand driven, occupationally directed learning approach is intended to move skills development away from learning fields and closer to skills development for occupations, newly emerging approach to skills development is known as the Occupational Learning System (OLS), the development, implementation and quality assurance of which is the responsibility of the Quality Council for Trade and Occupations (QCTO).

The outcomes-based approach to the development of qualifications resulted in the structure of SETA driven qualifications to be structured as a combination of unit standards structured as building blocks to the achievement of the qualification. These unit standards were

structured as either fundamental, core or electives to the learning process. The new QCTO qualifications have a different approach. They comprise knowledge, practical and workplace modules which forces a collaborative arrangement with employers for a holistic approach to learning.

The WP-PSET makes the following recommendations to strengthen the NQF:

- Provide the Quality Councils with greater flexibility to quality assure qualifications on NQF levels from which they were previously restricted. So, for example, Umalusi could quality assure certain Level 5 qualifications on the General and Further Education and Training Qualifications Framework. SAQA will mediate where differences arise between Quality Councils.
- Ensure articulation of qualifications. SAQA must provide guidance on articulation between the three sub-frameworks. They must ensure that institutions avoid barriers to acceptance and credit transfer. All institutions in the post-school system must work together to ensure that there are no dead ends for learners and clear career paths exist.
- Quality assurance and qualifications systems can tend towards bureaucratic implementation. Assessment for universities is institution-based and certification takes place at institutional level. For the rest of the post-school system, strengthening external assessment systems for national qualifications is a priority. The state will continue to assess the NCV and N-courses. It will also take responsibility for the assessment of the National Senior Certificate for Adults. This will also reduce the need for the complex system of individually registered assessors, moderators and verifiers. Quality Councils should use external assessment to reveal poor performance.
- Recognition of prior learning (RPL) remains a key approach to redressing past injustices and recognising competence gained through practical workplace learning and experience. RPL must be embedded within the education and training system with significant improvement in the availability of RPL services across the country. This strategy must include the establishment of a co-ordination mechanism for RPL.

3.5 Skills Planning and the Role of Occupations

The WP-PSET observes that "although South Africa has put in place a range of ambitious measures to improve skills planning, the system neither produced good information about skills needs, nor increased the quality of provision in areas needed in the economy". The White Paper concludes that the limited credibility and impact of the current sector skills planning system is due to inadequate research capacity; lack of economics, labour market and industry expertise; poor data management and lack of planning. The WP-PSET commits the DHET to establish a "central unit for skills planning" as part of the vision of "building an expanded, effective and integrated post-school system" for the country. It is expected that

the central unit for skills planning will promote social dialogue and engagement around current and future skills needs, and trends and developments on skills supply and demand. The WP-PSET states that "the Central Unit for Skills Planning will work with institutions such as universities and other research institutions to develop an institutional mechanism for skills planning, which will become a repository of labour market information, develop skills demand forecasting models, and promote and build labour market research and analyses skills for the country".

The current idea underpinning a credible skill planning mechanism in South Africa is that the state, as opposed to the market, will take a key role to directing economic development, facilitating employment and determining the type of skills that people require to obtain decent and productive employment.

Due to the large number of unpredictable variables which affect demand, the process of identifying
skills shortages and skills mismatches are neither a formulaic nor an algorithmic science in that it is not possible to calculate the exact numbers of people needed in the different occupations or sectors. Instead, it is only possible to provide signals on where demand outstrips the supply for specific occupations at certain points in time.

Following the analysis of skills supply and demand conducted, three types of mismatches were identified:

- demand mismatch,
- education supply mismatch, and
- qualification-job mismatch.

The Role of Occupations in Skills Planning

The OFO is best described as a skills-based coded classification system that captures all jobs in the form of occupations. It provides the framework for identifying, articulating, reporting and monitoring skills demand and supply in the South African labour market. The OFO adds value to skills development planning and implementation purposes in that it:

- provides a common language when talking about occupations;
- captures jobs in the form of occupations; and
- groups occupations into successively broader categories and hierarchical levels based on similarity of tasks, skills and knowledge.

Essentially the OFO provides everyone working in the realm of skills planning and development with a common language within which to understand and describe the many jobs in our organisations, sector and country as a whole and to define the demand and supply of skills in relation to these jobs. The aim ultimately is to describe all related jobs in

occupational groupings, using the same language, irrespective of the nature of your organisation. To know what skills development and training is needed, requires a clear framework of occupations within which these needs originate and will contribute to. The Organising Framework for Occupations (OFO) provides the framework for categorising jobs across all economic and service sectors into occupational groupings with a range of titles - including alternative and specialist titles - with clear descriptors and tasks within each occupational grouping.

The OFO is said to have been constructed from the bottom up, by

- analysing all jobs according to similarities in tasks and skills required;
- categorising similar jobs into occupational groupings; and
- classifying occupations into these occupational groupings at increasing levels of generality.

SETAs have been required to use the OFO in the submission of the 5 Year Sector Skills Plans and Annual Updates since it was formally adopted in August 2005. The occupational shortages, skills gaps and priority skills reporting format enables the identification and annual publication by the DHET Occupations in High Demand List (see NSDP). Tracking skills scarcity on the basis of demand, i.e. how many people are needed to fill jobs and occupations for work and sector operational and productive performance is essential. Tracking how the scarcity is manifested in a sub-sector, sector and across sectors is essential to inform strategies to reduce the scarcity and attain equilibrium in the labour market between demand and supply. Employers provide information at occupation level so that SETAs are able to roll this up at the right level to enable identification of common skills development needs and interventions which links directly to the development of occupational qualifications of the Occupational Qualifications Framework.

The purpose for using the OFO across the SETAs and the Department is to ensure consistency in reporting and monitoring in order that trends can be identified and aggregated across economic sectors. The information so collected will enable the Department of Higher Education & Training to develop the National Guide on occupational or employment trends. This also provides SETAs with the
opportunity to develop strategies jointly across their sub-sectors and with other economic sectors facing similar skills shortages.

The value of using the OFO for industry is the following:

- Job titles are more consistent and specific to the output of a post. The profiles developed for occupations could be used to inform post profiles and job descriptions.
- The curricula and assessment specifications developed for occupations could inform performance assessment processes as a benchmark.

- Labour market consistency in naming convention when advertising vacancies.
- Ease of generating legislated reports.
- Link to Occupational Qualifications.
    - Occupational tasks form the starting point for occupational qualification development and assessment.
    - Competence or workplace output is linked to specific tasks, for which curriculum components and standards are being developed.
- Occupational pathways, developed by the QCTO could be used to inform career management of occupational groupings in the workplace.

Guided by the Organising Framework for Occupations (OFO) in which jobs are categorised into generic occupational groups, with related titles, descriptors and tasks, qualifications and certificates will be developed relative to these occupational groups. The OFO is structured according to 5 levels of classification. Each subsequent level of classification is derived from the former. Each major group will have a number of sub-major groups. Each sub-major group will have a number of minor groups. Each minor group will have a number of unit groups. Each unit group has a number of occupations related to it, wherein occupation specific titles, alternative titles and specialist titles are found. The OFO is organised around 5 skills levels, which is correlated to the education and training levels of the NQF. Major groups also define a set of tasks for related occupations.

The examples below for major groups 2 and 6 were chosen as bearing some link to the jobs in the environment, conservation and / or natural resource management sectors. As you can see this list of tasks is very broad. These tasks provide an initial inroad into the OFO to begin mapping organisations' job titles against the OFO occupational codes and titles.

The framework used for the design and construction of ISCO - 08 and therefore the OFO is based on two main concepts: the concept of the kind of work performed and the concept of skill. The classification units are therefore the jobs (reflected as occupations on the OFO) whilst the classification variable is the kind of work done (that is, the tasks and duties), and the classification criteria for identifying Major, Sub Major, Minor and Unit Groups are the two dimensions of skill, i.e. skill level and skill specialisation. The output of occupations clustered under the fourth level of the OFO (Unit Group) is described in terms of tasks and a descriptor.

Occupations are thus related to the tasks defined at the Unit Group and an occupation descriptor describes what the application of the variety of tasks ultimately produces or delivers in the world of work. An occupation descriptor always either indicates the unique service the occupation renders or the unique product the occupation produces in executing some or all the related tasks in a specific context. Jobs in the workplace could either be

related to occupations or specialisations on the OFO. The association depends on the level of uniqueness of the output of the job on the workplace.

For the purposes of identifying the OFO occupations, the following definitions must be adhered:

- A job/work is a set of tasks and duties carried out or meant to be carried out, by one person for a particular employer, including self-employment.
- An occupation is a set of jobs whose main tasks and duties are characterised by a high degree of similarity (skill specialisation).
- Skill is defined as the ability to carry out the tasks and duties of a given job. Two dimensions of skill are used to arrange occupations into groups. These are skill level and skill specialisation.
- Skill level is defined as a function of the complexity and range of tasks and duties to be performed in an occupation.

Skill level is measured operationally by considering one or more of:

- the nature of the work performed (i.e. the complexity and range of work) in an occupation in relation to the characteristic tasks and duties defined
- the level of formal education defined in terms of the International Standard Classification of Education (ISCED-97)2 required for competent performance of the tasks and duties involved; and the amount of informal on-the-job training and /or previous experience in a related occupation required for competent performance of these tasks and duties.

Classification of Education Subject Matter (CESM) is a Higher Education Subject Classification System that works in a similar way as the OFO. There are 20 Educational Fields (denoted by two digits), each subdivided into a number of sub-fields (a total of 239 denoted by four digits), each subdivided into subjects (denoted by six digits). In order to assist in career guidance all Unit Groups (four digits) were linked to the most appropriate CESM code at two (2) digits (where the overlap is too big) or four (4) digits. This can direct learners and Career Councillors in obtaining more information on the underpinning knowledge areas for groups of occupations.

4. Aligning concepts and policy

Most skills development policies including the Skills Development Act does not provide a clear glossary outlining definitions of the concepts used. Therefore, it is left up to the reader to interpret the statements made which leads to a range of different interpretations. This can create challenges for implementing agents as the notion of skill, knowledge, occupation, jobs, work and employment are highly contested concepts. In this chapter, these concepts are re-examined by matching core attributes that surfaced during the literature analysis to the application of the concepts in the various policies discussed in the previous chapter. Aligning concepts to policy in this way, will provide an opportunity to identify mismatches. These mismatches can be crafted into policy recommendations.

4.1 Concepts of skills and Knowledge

In this section, we analyse the use of the concepts skill and knowledge within the selected policies in the previous section.

On the concept of skill:

- Skill as an individual competence relates to the individual's ability to perform tasks in the workplace whereas skill as an attribute of the collective is a broad term used to cover all the skill required in the labour market. Within the PSET policy, the term skill is used as an attribute of the collective. It refers to the collective skill of the labour market. It does however, ignore the concept of skill from an individual perspective. This is logical as policy is the overarching framework. Bringing the collective definition from policy to implementation is a challenge for the PSET institutions tasked with policy implementation.

- There seems to be strong bias for formal learning in PSET policy. The fact that 80% of the PIVOTAL grants payments by SETAs confirm this notion. There is a need to recognise and support non-formal and informal learning as well. This is especially applicable with future skills. Formal qualification seems to always be developed on historical information.

- The concept of skill on its own is often vague as its meaning is clearer when used contextually. It is easier to understand the concept of skill when placed in context, like skill gaps or skills shortages. SETAs need to understand the contextual use at sector, sub-sector and industry level. This will lead to better data collection and skills planning.

- Skill is productive, expandable and social: It is difficult to interpret if the use of the terms skill when used in specific contexts, adhere to the PES concept. The NSDP must include skill in all three aspects as productive skill is important for the economy, expandable for

the growth of individuals and the firm and social to ensure co-dependence of workers within the work environment

- Essential Skills are skills that provide a foundation for work and lifelong learning (e.g., reading, writing, document use, numeracy, computer use, thinking, oral communication). Academic education provides a solid foundation for the development of essential skills. Weak foundation skills inhibit economic growth and development. The PSET system must provide mechanisms to improve the essential skills of all citizens. The concept of lifelong learning is embedded in the NSDP.

- Employable skills are skills needed to enter, remain at, and progress in work (e.g., personal management skills, adaptability, working with others, having a positive attitude). Data collection via SETAs need to be improved to develop a rich and detailed understanding of employable skills at the sector, sub-sector and industry level.

- The level of skill is directly correlated to the level of complexity. This is reflected in the OFO where level of skill is aligned to the major occupational groups. The more the complexity of the skill, the greater is the level of skill and the knowledge required. This relates to the shift from a low skill to a high skill economy.

- Informal education and training are equally important to formal education and training especially through work experience and mentorship. The skills planning system must be flexible to include and acknowledge learning gained from a multiple of influences. This more than RPL. It involves finding some system to acknowledge the skills of employees that are acquired through informal learning.

- Skills shortages and skill gaps are forms of mismatch that are potentially driven by factors such as technological change, there may exist some correlation. More education and training initiatives could simultaneously reduce skill obsolescence and skill shortages by lowering a firm's reliance on external hiring.

- Skills mismatch exist at varying levels and extend beyond just occupational shortages and skills gaps. The current skills mismatch concepts are too narrow. The concept of skill mismatch is multi-dimensional and encapsulates a number of measures of both education and skill, some of which are very loosely connected to each other. The form of mismatch that is to be addressed, the interdependence between various forms of mismatch should also be understood and measures designed to address them are key activities that SETAs must focus on.

On the concept of knowledge:

- Experiential knowledge, procedural knowledge, disciplinary knowledge is important for the development of skill. Hence, they must be incorporated into curricula and qualification development. They need to be clearly articulated in the three qualification sub-frameworks that support the implementation of the NQF.

- Explicit and Implicit Knowledge: Explicit knowledge is the most basic form of knowledge and is easy to pass along because it's written down and accessible. When data is processed, organized, structured, and interpreted, the result is explicit knowledge. Explicit knowledge is easily articulated, recorded, communicated, and most importantly in the world of knowledge management, stored. Explicit knowledge is something we learn in schools, from reading or listening to speakers at a conference. This is part of the foundational learning system and is already embedded in the NQF.

- Knowledge as status. Higher education is understood as preparation for work and career and that education itself is the starting point for an explanation of career outcomes and earnings. Therefore, many people acquire qualifications and strive to achieve a doctorate or professorship for the status it holds. The acquisition of knowledge as a social tool has its merits and can lead to economic benefits.

4.2 Concepts of Occupations and Jobs/Work

In this section, we analyse the use of the concepts occupations and jobs/work within the selected policies in the previous section. Interesting, a quick scan of the five policies that underpin the WP-PSET makes little mention of jobs or occupations as these concepts are used in the occupational classification system. It makes logical sense as the WP-PSET looks more at the supply side and at the education and training institutions, whereas a conversation on jobs and occupations are more demand side discussions.

On the concept of jobs/work:

- Work is the practice of knowledge: Linking work and knowledge must form part of policy. Change happens fast in the world of work, driven by innovation and by developments in technology and markets. Keeping up with this pace of change is a continuing challenge for workers. There is a persistent gap between the kind of knowledge and skills that are most in demand in the workplace and those that education and training systems continue to provide.

- Job profiles and job descriptions. Tasks and activities that define a job are clustered into the creation of occupations. As jobs feed into data on labour data, SETAs must collect

data on jobs in their sectors. Job profiles can be used to determine job shifts and the changing nature of the occupation.

- Measuring the quality of a job. The criteria for measuring the quality of a job include earnings quality, job security and quality of working life. South African labour policy should include a work life balance component especially in the wake of the use of mobile communications which is making the worker to be available on a 24-hour basis.

- Job creation and destruction in both the informal and formal environments needs to be measured. Measuring job creation or number of new jobs created and the type of job created at a sector level as well as the number of jobs that have been lost and no longer exist is important for determining where potential new job growth lies.

- Innovation and knowledge: Technological innovation, and organisational transformations are changing the way business are conducting business leading to changes in the types of skills demanded by employers in the workplace. Due to advances in technological innovation, new jobs are emerging while other jobs are becoming extinct, thus leading to changes in the skill requirements employers need in the workplace. The tasks performed and skills needed to carry out such tasks within existing occupations are undergoing significant changes.

On the concept of occupations:

- Occupational identity. Using the criteria of changing institutional and cultural contexts, the social relations of particular workplace environments and changing labour market conditions and hierarchies, occupational identities inform the labour market of those occupations that are popular. Occupational identity and professionalism are linked and needs to be clearly defined.

- Occupational shortages/surpluses. The share of employment in shortage occupations shows the ratio of jobs that are in shortage and surplus, the intensity of shortages or surpluses provides an idea of how strong such shortages and surpluses are. In some occupational groups, several jobs might be in shortage, but the intensity of the shortages might be small. In other occupational groups, a few jobs might be in shortage while the shortages are very intensive.

- Occupational shortage occurs when there are scarce professionals to fill up existing job vacancies, while surplus arises when there are more than enough professionals for existing job vacancies. One of the key deliverables in developing sector skills plans, is for SETAs to determine occupational shortages for their sectors. In international literature, this is also referred to as skills shortages.

4.3 Concepts of Work and Employment

In this section, we analyse the use of the concepts work and employment within the selected policies in the previous section.

On the concept of work and employment:

- The concepts of work and employment must be differentiated as both are equally important to the individual in the labour market. WP-PSET refers to work as a collective form under the term "labour market'. Labour market refers to all the work and employment opportunities that is resented for workers. In the WP–SET, the focus is not so much on the concept of work as an economic concept but the workplace as a training concept: a place where skills can be learnt and opportunities provided for the development of workplace readiness for new entrants into the labour market.

- The WP-PSET refers to the use of "*experts from industry to teach at colleges on a part-time or occasional basis*". In an ideal environment, this is an excellent notion for the transfer of applicable knowledge and skill into the training context. But in practice, this presents many challenges. Part-time would refer to weekends and evenings and therefore learners in full-time learning programmes, will not generally get access to this level of expertise.

- The WP-PSET provides a case for "linking of the newly formed community colleges to the public work programmes". This statement can be viewed from two perspectives: one point of view could interpret this as the provision of cheap labour for these programmes and the other is the opportunity to provide workplace learning opportunities for College internship programmes.

- Unemployment rates characterise a situation where unemployment in an occupation is high. Average unemployment rates can be a signal of occupational surpluses, while below average unemployment rates could signal surpluses in certain occupations. High levels of unemployment in part reflect a skills mismatch in the economy. The structure of the economy has evolved in response to technological changes, demands of production and developments in the global economy, growing the need for higher-level skills.

- Education and skills training form a logical part of a comprehensive approach to facilitating the transition of informal activities to the formal economy. Ways of recognizing skills acquired through informal training and on-the-job experience may help workers secure better jobs. Upgrading the technical quality of informal apprenticeships, paying attention to how this kind of training can open up opportunities in particular for girls in non-traditional occupations, and improving working conditions and health and safety practices can help young people not only acquire skills but ease their way into the formal economy.

- When the WP-PSET makes reference to "*universities to provide high skills for the labour market*", it infers a direct correlation between skills levels and university qualifications. This is in line with the interpretation of skills levels within the occupational classification system which aligns educational levels to skills levels.

5. Policy recommendations

The ILO states that cornerstone of a policy framework for developing a suitably skilled workforce are:

- broad availability of good-quality education as a foundation for future training;
- a close matching of skills supply to the needs of enterprises and labour markets;
- enabling workers and enterprises to adjust to changes in technology and markets; and
- anticipating and preparing for the skills needs of the future (ILO, 2010).

The ILO (2010) further posits that a good skills development system will be able to:

- anticipate skill needs; engage employers and workers in decisions about training provision, including in specific sectors;
- maintain the quality and relevance of training;
- make training accessible to all sectors of society;
- ensure viable and equitable financing mechanisms; and continuously evaluate the economic and social outcomes of training.

One of the most serious weaknesses within the PSET system is in the area of skills planning. Inadequate research capacity, a lack of economics and labour market expertise, poor data management, and lack of skills planning expertise have resulted in the development of sector skills plans by SETAs that have limited credibility and relevance in their sectors and the national economy. Furthermore, the sector skills plans are not contributing to the achievement of national economic plans and strategies. Far more, and better-quality, research is needed if skills plans are to be improved and gain credibility and value. Workplaces are good sources of information on current skills shortages, which is a crucial aspect of planning, but many other sources of data are required to enable the needs of the labour market to be fully understood and to ensure future demand.

The literature on skills, knowledge, occupations, jobs/work and work and employment revealed that although the terms are often contested and interpreted differently, key PSET policy stances are not clear on their contextual meaning and in many instances do not acknowledge their existence.

In all countries the implications for skills development are momentous. Many of the jobs that will be generated over the next two decades do not exist today; yet most of the future workforce is already in education and training. Even so, the need to upgrade skills apply not only to young people in schools, universities and training institutions, but also to the current generation of workers. Skills development policies must reflect the kinds of skills and

knowledge required for the jobs and occupations of the future in a dynamic work environment.

Having analysed, the concepts as they are discussed by several leading authorities and experts in the fields, and then engaging in understanding the post school policies; the previous section took a deeper dive into the policy to determine the extent of alignment of the concepts to policies. This chapter focuses on policy recommendations in instances where some key aspects have been omitted but will add value to the skills development system in South Africa. Policy recommendations are provided for skills and knowledge as they are linked and relate to the educational domain in terms of the achievement of formal qualifications. This is followed by policy recommendations for occupations and jobs/work as they are interpreted within the broad occupational classification system and the labour market. The final set of policy imperatives are on work and employment.

5.1 Skills and Knowledge

Many occupational shortages and skills gaps are found across economic sectors. Narrowly focused sector skills plans do not allow for the flexibility needed in a fast-changing economic environment. Currently, economic and developmental priorities are not being adequately addressed in the individual sector skills plans prepared by SETAs. The skills level of both existing employees and those entering the labour market is viewed as an important pillar of government strategy for attracting investment, industrial expansion and job creation. ***There is a strong need to produce labour market information, and to coordinate government-wide processes to determine skills needs, address those needs with relevant and high-quality programmes, and fund and support skills development that is accessible in all parts of the country especially rural areas.***

A large part of the labour market may have obtained a qualification in one field but work in another. There are any reasons for qualifications mismatch. Qualification mismatch arises when workers have an educational attainment that is higher or lower than that required by their job. If the education level of workers is higher than that required by their job, such workers are classified as over-qualified; and vice-versa. Field-of-study mismatch arises when workers are not employed in a different field from what they have specialised in. Change in under-qualification arises when employers who face difficulties finding workers with the right skills resort to hiring workers who are underqualified for the job, that is workers' qualification level is lower than what is required. ***Occupations in which the share of underqualified workers increases faster than economywide share signal skill shortages, while occupations in which a change in the share of underqualified workers is lower than across the economy signal surpluses. These must also inform the measurement of skills mismatch.***

The goals discussed in the WP-PSET is in general reflected against the concept of education as opposed to skills and knowledge. Here, the word education incorporates all the requirements of the skills and knowledge paradigms to provide a national picture. However, the goal on "*a stronger and more co-operative relationship between education and training institutions*", brings the conversation to include knowledge and skills as two important aspects of the training system. It defines knowledge as "*general principles and laws*" that is applicable in changing work environments. Although, it does not utilise the term skill directly, the term is embedded within the explanation of practical experience as "*applied knowledge*" and "*ability to act effectively*".

The WP-PSET makes many references to the skills development system which is the organisations that make up the system. A large portion of the WP-PSET places much emphasis on the system players/organisations and maps out guidelines and processes to improve the operational performance of these organisations. One of the goals makes reference that these organisations "*must remain keenly aware of the skills challenges facing industry, commerce and government institutions as well as those of individual in need of skills development especially the youth*" (WP-PSET, 2013). ***However, no other aspect of the policy provides any further guidelines for implementation, yet this statement is the most critical for the advancement of skills and knowledge generation for economic growth and personal development of the citizens. Implementing agents must define guidelines and processes for implementation.***

On the section on Universities, the WP-PSET commences with an explanation of the role of universities as envisaged by the NDP. However, the rest of the section provides information on the differentiated system, establishing partnerships, student support and research. It is not clear how universities will support the growth of graduates in scarce skills areas. University programmes take a fairly long time to register whilst occupational shortages change rather quickly to match adjusting changes in industry. ***The NSDP should have provided greater clarity on how this would be achieved.*** In addition, the NDP mentions that the role of the university environment is to provide people with "*high skills for the labour market*". The granting of bursaries is not the only contributing factor to the development of scarce and priority skills. ***The development of programmes that address occupational shortages as reflected in the Occupations in High Demand List and skills gaps would also contribute to addressing priority skills needs.***

The structuring of the WP-PSET makes it clear that the different parts of the training system fulfil different functions and address different needs of the citizens. The introduction of CET Colleges brings in the social context of the development of knowledge and skills whist the TVET and UoTs focus more on technical skills and the Universities on knowledge generation. ***This co-ordinated but differentiated system is able to provide the varying types of knowledge and skill required for economic and social growth of the country and its citizens.***

The structuring of the NQF provides an integrated framework for access and progression. The NQF and its sub-frameworks adequately deal with the formal recognition of qualifications across ten levels of learning. However, although articulation is mentioned in the WP-PSET, NSDP and OFO, there is no clearly defined matrix to display knowledge and skill articulation as part of career development. Even where SETAs invest in career development interventions, they do so in Silos. An example is the career guidance work of the BANKSETA. ***Although many of the occupations have information and communications technology activities embedded in them, joint SETA intervention with the MICT SETA is required to address this.***

An important question to ponder is whether the PSET system has weak policies or weak implementing agents within the skills development system. The extent of employer involvement in skills planning is the completion of annual WSPs. SETAs currently do not have processes in place to validate the data provided. ***The current validation system involves checking the data for completeness as an administrative function not a data collection function of the research process. This must be improved and data validation confirmed to ensure useful and meaningful data is used in skills planning.***

The WP-PSET and the NSDP are both written from a national, broad perspective. This is understandable as these are framework documents. However, skills imbalances occur because the individuals within the labour market system do not possess the skill required by industry and the economy. ***It is therefore important to bring into the discussions, ways to measure the competence of individual to aid skills planning.***

One of the outcomes of the NSDP reads "*improving the level of skills in the South African workforce*". This relates to the training of the employed to improve their productivity and to address skill imbalances in the workforce and the labour market. Here, the word skill is used to refer to the imbalance of the demand and supply of skill within the firm. ***As this is firm specific, learning may be informal as well as formal. However, if this is not linked to any benefit for the employed worker, motivation to engage in acquiring the right skills may not exist.***

Another outcome of the NSDP addresses "*increase access to occupationally directed programmes*". The explanatory notes provide an understanding of what is wrong. It acknowledges that the skills base of SA is too low. However, the QCTO is not responsive to deal with this. ***It takes long to register occupational qualifications and as long as the TVET colleges lack solid partnerships and relationships with industry for workplace learning, the outcomes of occupational learning programmes will retain the same as the current vocational programmes are where theory is learnt with no practical component.***

The WP-PSET and the NSDP make very little reference to knowledge. It seems as if knowledge is included and embedded in the manner in which the concept of skill is used. However, the literature on knowledge discusses the existence of several types of knowledge including experiential knowledge, procedural knowledge, propositional knowledge, explicit and implicit knowledge, disciplinary knowledge, interdisciplinary knowledge and epistemic knowledge. Skill is the application of knowledge and work is the practice of knowledge. Therefore, conversations on skills development that excludes reference to knowledge is limiting in developing strategies to address skills shortages, skills gaps, skills surpluses, skills imbalances, skills mismatches, etc. ***Addressing all these concepts requires a deep dive into both skill and knowledge.***

Much of the policy documents provide some framework for linking education and work or the workplace. A key requirement for this is the linkages and partnerships between industry and training institutions especially in the development of curricula and training materials. The WP-PSET states that "*one of the most serious weaknesses within the PSET system is in the area of skills planning*". The fundamental weakness lies in the SETAs inability to develop SSPs that are able to implement the broad principles and actions stated in the WP-PSET and the NSDP. The entire section in the WP-PSET on "*linking education and the workplace*" is premised on the need for proper skills planning. This system needs to address skills needs at national, sectoral, firm and individual levels. ***The establishment of a skills planning unit at DHET will only address national priorities. Clarity is required on how skills planning will address the needs of other beneficiaries in the system.***

The contextualising of skill is only possible if employers register their customised learning interventions to the requirements of the NQF and its sub-frameworks. At present, this is a difficult task to perform with the current accreditation processes and systems. A more dynamic model is required. To understand the concept of skill best, it must be viewed from the perspective of the firm and the individual. It is at this level that skill mismatches and imbalances occur and it is only at this level that they can be managed. If skills planning does not collect data at this level, then the planned interventions will meet quantitative targets but not address the imbalances in skills supply and demand. ***For the firm and the individual, skills must be essential and contribute to making them employable; that is, they are in a better position to be promoted or to find employment.***

On the outcome that addresses "*skills development support for entrepreneurship and co-operative development*", SETAs and the NSF will only be able to provide appropriate skills training if they carry out research on industry growth points and identify potential growth areas. Entrepreneurship training is not generic in nature and programs like the new venture creation have not proven to be successful.

On the principle of "*understanding skills demand*" SETAs need to analyse sectoral growth by determining required skills and occupations to very occupations in high demand and skills gaps. The current WSP and WSS process does not provide adequate data collection to provide meaningful data for analysis. On the principle of "*steering supply"*, the explanation within the NSDP focuses on the role of Quality Council. This is where a clear mismatch occurs as in terms of the demand side as the supply side should focus on mechanisms to meet the demand. ***The clearer the demand is in terms of knowledge and skill required by the sector; the supply side will have a clearer picture on what skills and knowledge to focus on.***

There are several reasons why it is difficult to align skills to labour market need. Grant (2016, p8) explains that "*skills are developed over a long time period, whereas labour market needs are immediate*". Employers are concerned about meeting the current demand of their skills needs, whereas labour market participants are concerned about positioning themselves for stable employment over the long term as thy seek job security. ***People invest heavily in specialized skills in areas that have a solid track record of providing good employment and earnings. Or they may specialize once they have had an opportunity to develop a secure relationship with an employer. Alternatively, people may develop broad-based skills that they believe position them for a wide range of jobs over time.***

5.2 Occupations and Jobs/Work

A simple relationship exists between jobs and occupations. Many jobs with similar attributes are combined to develop an occupation. Both concepts are well defined in the OFO. Jobs are specific to firm and individual employees whilst occupations are more general categories within the labour market. ***Within the South African skills planning landscape, the concept of occupations is central to the discussions. When looking at the demand for skills, the impact on the number of jobs, the structure of the jobs, the composition of the job and job earnings are important.***

Linking occupational standards and educational standards will address some of the skills mismatches that the economy faces. ***Providing a clear link between occupational standards and educational standards within the NQF framework within the three qualification sub-frameworks will bridge the gaps between occupation and educational attainment.***

On TVET colleges, WP-PSET identifies one of their roles is improving student support including "*placement in jobs*". This will provide a new perspective and function of the TVET Colleges. It may also serve as an important measure of the quality of the qualifications by measuring the placement rate of these TVET graduates. This is a positive role that the college environment can play and will stimulate a better understanding of industry skills needs. Making career counselling a responsibility of the TVET colleges is the right choice with SETAs

to play a supporting role, but career counselling cannot be separated from occupations. There must be an alignment of career progression to broad occupational paths using the group structure of the OFO.
Although not directly stated, the role of the TVT environment in providing career counselling underpins, the understanding that TVET Colleges must have a good sense of the jobs available in industry.

The review of the qualifications and programmes make no mention of alignment to occupations or OIHD. If this review is to provide meaningful information and result in the creation of relevant vocational programmes, jobs and occupations must for part of this analysis. As per the NSDP the development of new qualifications will include work experience for certification and this will make these programmes more relevant in producing graduates who are work ready. ***The introduction of occupational programmes to both the TVET and the CET environments are new but an important part of growing vocational skills for mid-level jobs and occupations. Occupational programmes also play an important role in re-skilling where the labour market would have to change career paths as a result of the changes that the fourth industrial revolution may bring.***

The WP-PSET clearly indicates that poor skills planning is not creating the correct list of occupational shortages. This information is only available from industry. Industry skills planning using occupations as the foundation needs to be strengthened and properly linked to jobs. Industry understands jobs but data is collected according to occupations. ***Industry is tasked with aligning jobs to occupations as listed in the most recent 2019 OFO codes. Perhaps, the data should be collected as jobs and SETA occupation experts should do the alignment.***

Link between skills levels and job creation. It is understood that skills levels of the current and future labour force have a direct link to job creation in that the higher the skill level, the greater the chances of job creation. This is linked to the use of new knowledge and innovation and technological advancements.

The NSDP is a "*policy document with a specific focus on occupations in high demand*". NSDP outcome "identify and increase production of occupations in high demand". ***Create a national list. This list must be used by the PSET supply system and the skills levy funding institutions.*** If the data to collate the list is correct, then at least current occupational shortages will be addressed. NSDP reflects that the reason for using the notion of occupation is the language used in the demand side, which is the labour market.

NSDP indicates that it is important to "*maintain occupational standards*". Occupational standards are not static and require revisions as the nature of occupations change due to labour market shifts. Occupations become extinct, new occupations emerge and there are

also changes to current occupations. To ensure relevance DHET has been consistent in developing a process for SETAs and industry to amend the OFO as required. DHET has released new versions of the OFO every two years.

Linking jobs to occupations. ***Guidelines needs to be developed to align jobs to occupations.*** This pre-task to the development of WSPs should not be left to the employers but rather the appointment of OFO specialists to perform. This should be a SETA responsibility. In terms of Occupational classification, there is a need to relook the OFO in terms of the current labour market. ***Review the OFO to determine relevance of all occupations and to measure occupational change related to the changing economy.***

5.3 Work and Employment

Employment growth occurs when employment in an occupation grows faster than economy-wide employment. Employment growth signals strong demand for that occupation that results in skill shortages. Conversely, when employment in an occupation grows slower than economy-wide employment, it signals weak demand for the occupation, which could result into skill surplus. **Hours worked as a signal of growth.** Hours worked growth occurs when employers have difficulties hiring individuals with the skills required for the job, hence employers might increase the working time of employees. Therefore, if growth of hours worked in an occupation is stronger than economy-wide growth of hours worked, it signals skill shortages. When hours worked in an occupation grow slower than economy-wide hours worked, it signals skill surpluses. **Hourly wage growth as a signal of growth.** Hourly wage growth occurs when employers who are facing hiring problems increase hourly wages to attract workers with the right skills. Thus, if the growth of hourly wages in an occupation exceeds the economy-wide wage growth, it signals skill shortages. When hourly wage growth in an occupation is lower than economy-wide wage growth, it signals skill surpluses.

Measuring the work of self-employed individuals. Vocational guidance and employment services can often be improved to match people with training opportunities and to get trained people into jobs. Specific and targeted policies are required to assist small enterprises in investing in the skills required. People working in small enterprises and in self-employment, including those in rural areas and in the informal economy, as well as people in irregular work and precarious employment, should also have access to skills development and lifelong learning programmes. “Second chance” programmes, as well as drop-out prevention at an earlier stage, contribute to social inclusion.

It is important to note that in collecting data for measuring skills demand, SETAs focus only on their employer base to draw data. Therefore “*work in the formal and informal economy*” is not included in the analysis. In South Africa, the informal economy plays an important role

in the creation of work. ***Mechanisms must be created within the SETA skills planning process to include this aspect of the economy.***

Unemployment refers to the active working population who cannot find formal employment. Data on unemployment is drawn at a national level. ***It would be meaningful to draw data on unemployed who are seeking employment in the different sectors within the SETA ambit.*** This will provide a clearer perspective of the potential job-seekers in different industries. This will better aid the job creation strategies of the South African government.

Forms of employment is changing rapidly resulting in the standard form of employment slowly disappearing. SETAs must carry out research on forms of employment in their sectors as part of the skills planning process. ***New forms of employment are growing as a result of the fourth industrial revolution. These must be included in policy to provide clearer picture of employment structures.***

6. Conclusion

Policy is measured by the success achieved during its implementation. Policy implementation however, is dependent on understanding the framework, deconstructing its parts and applying clear principles for implementation. The concepts embedded in skills development and PSET policies as shown in this report have various meanings and is in most instances contextually based. Their correct interpretation is key to successful policy imperatives.

This report on the analytical and conceptual framing of the concepts of skill, knowledge, occupation, jobs, work and employment has been a challenging one due to the highly contested nature of the concepts. However, a deeper dive into the literature, revealed some interesting phenomena. Building these into policy may present a challenge; however, they are useful when planning for the implementation of policy.

International experience shows that countries that have succeeded in linking skills development to gains in productivity, employment and development have targeted skills development policy towards three main objectives:

- matching supply to current demand for skills;
- helping workers and enterprises adjust to change; and
- building and sustaining competencies for future labour market needs.

The first objective is about the relevance and quality of training. Matching the provision of skills with labour market demand requires labour market information systems to generate, analyse and disseminate reliable sectoral and occupational information, and institutions that connect employers with training providers. It is also about equality of opportunity in access to education, training, employment services and employment, in order that the demand for training from all sectors of society is met.

The second objective is about easing the movement of workers and enterprises from declining or low-productivity activities and sectors into expanding and higher productivity activities and sectors. Learning new skills, upgrading existing ones and lifelong learning can all help workers to maintain their employability and enterprises to adapt and remain competitive.

The third objective calls for a long-term perspective, anticipating the skills that will be needed in the future and engendering a virtuous circle in which more and better education and training fuels innovation, investment, technological change, economic diversification and competitiveness, and thus job growth (ILO, 2010).

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