

RESEARCH REPORT

OCCUPATION AND QUALIFICATION CLASSIFICATION REPORT:

A FRAMEWORK TO CLASSIFY OCCUPATIONS AND QUALIFICATIONS IN THE PUBLIC SERVICE SECTOR

MARCH 2022



Prepared for the Public Service Sector Education and Training Authority (PSETA)

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March 2022

© Public Service Sector Education and Training Authority, February 2022

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Acronyms

COREs	Codes of Remuneration
DHET	Department of Higher Education and Training
DPSA	Department of Public Service and Administration
HR	Human Resources
ILO	International Labour Organisation
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
NCAP	National Career Advisory Portal
NQF	National Qualifications Framework
OCS	Occupational Classification System
OFO	Organising Framework for Occupations
OIHD	Occupations in high demand
PSETA	Public Service Sector Education and Training Authority
PSET	Post School Education and Training
REAL	Centre for Research in Education and Labour
SAQA	South African Qualifications Authority
SASCO	South African Standard Classification of Occupations
SETA	Sector Education and Training Authority
SIC	Standard Industrial Classification Code
SSP	Sector Skills Plan
StatsSA	Statistics South Africa
TVET	Technical and Vocational Education and Training
VET	Vocational Education and Training
WSP	Workplace Skills Plans

1. Introduction

The purpose of this report is to develop a framework with which to understand how to map occupations and qualifications with a focus on the Public Service sector.

The report starts with a short discussion of the idea of occupation. In Section 2 several definitions of the term are provided, pointing to differences between weaker and stronger occupations as well as mentioned explanations of recent changes in forms of employment. This is relevant for the question of mapping of occupations in so far that new forms of employment are characterised by weak organisational identity and thus workers move between different jobs (work) several times in their working lives and organisations change their division of labour far more often. This phenomenon brings about the question of recognition of skills associated with work. The most common way in which society bestows recognition is through qualifications. This is highlighted in Section 3. The use of qualifications is not straightforward. Some argue that qualifications do not always express skill in the most accurate, certain or consistent way. Others point out the variety of meanings of skills. The aim of the conceptual analysis provided by Sections 2 and 3 is to provide an in-depth and multi-faceted understanding of 'occupation' and their complex relations to qualifications. This understanding is important for thinking about skills supply for an occupation or family of occupations.

With the view to get better synchronization between education and work, international organisations developed occupational standards, qualifications and occupational classification frameworks. In Section 4 a small sample of these classification systems are examined. Here three different systems are examined. The assumption is that if employers are involved in specifying the competencies that they need, providers will shift the content of their provision, and graduates will meet labour market needs. This will enable forward skill planning, system improvement and curriculum design. The Organising Framework for Occupations (OFO) is one such tool intended to serve as a systematic basis for skills planning. Employers are required to use the OFO to classify the workplace skills data through their annual workplace skills plans which are submitted to Sector Education and Training Authorities (SETAs) and form the basis for skills planning at a sectoral level. Other sources of information are also at times

utilised by SETAs. This data is then aggregated and submitted to the Department of Higher Education and Training (DHET) and combined with other data to describe the demand for skills in the labour market more broadly. This includes a biennial publication of the list of Occupations in High Demand (OIHD). This multi-tiered level of skills planning should then inform the development and delivery of programmes and qualifications in the Post School Education and Training (PSET) system. In this section, an overview is presented of the OFO and two other systems: ISCO-08, an occupational classification system framework developed by the International Labour Organization (ILO) and which has influenced the shape and form of the OFO and the Occupational Classification System (OCS), also informed by ISCO-08 and is used by Department of Public Service and Administration (DPSA). Section 5 turns to the National Qualifications Framework (NQF), the best system available, at present least, to broadly classify qualifications (and part qualification). Section 6 reflects on the task/skill-based form used by all the classification systems and points to some of the challenges this raises for mapping occupations to qualifications. This provides the background and rationale for the eight principles followed in constructing the mapping framework– the mapping of occupations to qualifications, which are presented in Section 7.

Together with the conceptual analysis, the draft mapping framework, which is focused on the occupation-qualification nexus, will assist skills interventions by PSETA and the Public service sector. In this draft, the framework is presented with an example from the Public Finance sector and Management sector. In presenting the draft mapping framework, the aspects of the mapping process are identified which depend on existing policy stipulations and do not allow for discretion. Furthermore, the identification of which aspects depend on discretionary information, whereby the user of the draft mapping framework takes into account macro and micro contextual considerations as well as their accumulated workplace knowledge. The report ends with conclusions about the mapping process (Section 8).

2. Ideas about 'occupation'

The notion of 'occupation' is important in understanding the idea of specialisation, which is central to educational preparation for work or the qualification pathway to an occupation. Christopher Winch (2010, 12) claims that occupations 'are primarily ways of organising work for economic purposes, but they are also ways of organising and acquiring knowledge'.

Job and occupation are related but distinct concepts. Multiple jobs can be categorised under a single occupation. Cohen, 2013 and Grant, Berg & Cable, 2014 draw a distinction between jobs and occupation: A given job is particular to a specific workplace. An occupation refers to a broad membership that spans across jobs. The literature provides several definitions of *occupation*. Anteby, Chan, & Di Benigno (2016, p.187) see the notion of occupation as socially constructed. This means that although an occupation is characterised by certain practices essential to the occupation, and occupational actors are all members of that practice, the status and strength of the occupations and its members, and their power to determine the work they do are influenced by the structural and cultural systems of society. Linda Clarke (2011) defines occupation as a "formally recognised social category, with a regulative structure concerning VET (Vocational Education and Training), qualifications, promotion and the range of knowledge, both practical and theoretical, that is required to undertake the activities and fall within it" (2011, p. 103). Clarke uses her definition to explain why bricklaying is an occupation and analyse the different formation paths of bricklaying in France, Germany, the Netherlands and England. She argues that even the simplest occupations, such as bricklaying, have values and history, and in their relation to other occupations they form part of the greater good of society. Stronger occupations are commonly referred to as *professions*. They are generally more regulated than occupations. Hodson & Sullivan (2012, p.260) define professions as a certain type of occupation characterised by abstract, specialized knowledge, autonomy, authority over clients and subordinate occupational groups, and a certain degree of altruism. Strong occupations have control over bodies of knowledge and create what is commonly known as 'labour market shelters' (Winch, 2010). They make use of credentials to establish and illustrate their specialised knowledge (Freidson,

1988, p.59). On the African continent, often the occupations for which TVET prepares people are not regulated, or less regulated.

The status and powers afforded to occupational groups and for occupational knowledge are not something that can be willed into existence. Occupations do well in terms of status when two main facilitating factors are present. The first is when they have labour market shelters or a monopoly of practice, and when they establish occupational councils and other labour organisations which regulate their members using control over recruitment, training and licensing as well as imposing work procedures and modes of self-discipline (Freidson 2001; Standing 2009). Organised occupational groups negotiate (usually the process is mediated by the state) with other groups to establish the scope of their specialisation. They use various strategies, form various institutional bodies within and across sectors, and establish specific practices and rhetoric to attain public legitimacy. With these societal means, they aim to persuade the consumers of their expertise, entrench their authority in the market and exclude other groups from establishing their authority and entering the market. Through the state's legal and bureaucratic apparatuses, state ministries, occupational councils, sector skills councils, civil and criminal courts and other regulatory bodies, occupations seek policy legislation on what knowledge and qualifications legitimately belong to the profession, the consequences that should be imposed on those who breach occupational rules, and how to restrain the powers of other occupations which try to prevent the emergence and development of new ones (Freidson 2001; Standing 2009).

In analysing specialisation, Elliot Freidson draws an important distinction between types. He argues that when the tasks of occupation are simple and repetitive, the specialisation is 'mechanical' (2001, pp. 23 and 111) as it involves no (or hardly any) individual discretion. 'Discretionary specialisation', on the other hand, depends on 'fresh judgement' as the tasks cannot be performed in a standard repetitive way. Each case has some or other variation. The work performed may include some routines which can be repeated but because of the variation of individual cases, it is expected that the worker will know when and how to vary tasks and the routines those tasks involve, by applying discretionary judgement (2001, p. 24).

Occupations and professions have a long history but the use of the concepts has become more pronounced in recent times due to the changing nature of employees' affiliation with employers (Anteby et al., p.184). There has been a shift towards employees having a stronger occupational identity as opposed to organisational identity. Lifelong employment or employment for a substantial amount of time at a single organisation has become somewhat of a relic of the past. A longitudinal study in the United States indicated that employed Americans born between 1957 and 1964 had an average of 11.7 jobs (Bureau of Labour Statistics, 2015). Even a country such as Japan renowned for lifelong employment and loyalty to a single organisation has seen a recent decline in this type of employment relation. According to some studies, lifelong employment in Japan applied to less than 20% of the working-age population as far back as the mid-2000s (Wolff, 2008, p.53).

Guy Standing (2014) is a famous theorist of 'work'. He gave a name to the shifts in the traditional type of employment. He calls it the precariat or precarious class, which he defines as follows:

One defining characteristic of the precariat is distinctive relations of production: so-called 'flexible' labour contracts; temporary jobs; labour as casuals, part-timers, or intermittently for labour brokers or employment agencies. But conditions of unstable labour are part of the definition, not the full picture. More crucially, those in the precariat have no secure occupational identity; no occupational narrative they can give to their lives. (2014, p.10)

Although there are over 1500 occupations currently on the OFO, it could well be argued that many of those working in these "occupations" are indeed not participating in and belonging to occupations but merely have jobs— they are low-wage, low-skill, routine and offer little prospect of progression (Keep & James, 2012).

Several points about occupation emerge from the above discussion

1. Since occupation is a social activity, workers do not simply perform their specialised tasks; they often share norms and values and views about a society that goes beyond their working lives. There is then a normative dimension to 'occupation'.

2. Knowledge required for discretionary specialisation is formal (opposite to everyday knowledge). It is acquired by training and is signalled in the labour market through qualifications. Formal knowledge in preparation for discretionary specialisation varies but in some or other ways it includes conceptual and practical knowledge.
3. Occupations try to control a slice of the labour market and they use a variety of regulative structures, practices and the rhetoric to do so. They try to control recruitment to the occupation, training and licencing to practice.
4. Authority relations regulate the social relation between people within an occupation, rules of promotion and recognition. Power relations structure the stratification between (inter-occupations) and within occupations (intra-occupations). They differentiate occupational capacity (and discretionary specialisation alongside it) by status, years of experience and permission to perform certain tasks and exclusion from others.
5. The career paths of some occupations are longer and more complex and attainment of qualifications is far harder.
6. Broad social, economic and technological conditions in society at large influence the development of new forms (precarious) of employment.

The most common way in which occupations are distinguished is qualifications. Depending on the level of regulation of the labour market and the coordination between key social partners (employers, unions, occupational bodies and government institutions), qualifications will function as indicators of skill. We turn to this in the next section.

3. Skills and qualifications

Bryson (2017) argues that in defining skill, it is often not referring to the same thing, even though the same word is used to name it. She argues that there are several disciplinary perspectives on 'skill' and that these disciplinary perspectives can be further subdivided into disciplinary clusters (Bryson, 2017, p. 19). What makes defining skill an exercise that is far from consensual is that disciplinary perspectives are not so much 'perspectival' as they are 'ontological'; in other words, the problem is not that the same object is being defined albeit in different ways and approaches, but that different objects are being defined yet all are using the same name, i.e. 'skill' (Bryson,

2017). Bryson argues that each disciplinary perspective on 'skill' examines only part of the full nature of 'skill' and that to analyse (and operationalise) from only one or few of these perspectives, results in a limited view of 'skill' which then gives rise to a policy that may be ineffective or even harmful. In what follows, the understanding of three main scholars of skills and knowledge are brought to the fore.

Alain Mournier argues that skill is made up of three dimensions. The three dimensions have unequal weighting across occupations and are shaped by the relationship between employers and their workers (2001). The first dimension refers to technical skills or the use of equipment and procedures. The second refers to personal attributes of a worker, their ability to follow instructions and routines and complete procedures. The final refers to levels of education associated with a certain occupation. Mournier suggests that what it means to be skilled is determined by what is seen as the important dimension in any occupation (2001).

For Freidson, skill and knowledge are closely linked but analytically distinct dimensions of work. Both are important for the performance of work. In this approach skill is the ability to do something well (2001) and it includes both mental and physical proficiency. The former is the knowledge and understanding about a problem. The latter is the knowledge of how to arrive at a solution as well as the physical dexterity to do so. In this view, bodies of knowledge with their methodological routines have a specific and important role in learning to solve specific problems or performing specific tasks. Freidson asserts that skill is the application of knowledge to the performance of a task (2001). Assumed within this approach is the presence of bodies of knowledge that are obtained formally but also appropriate opportunities to learn to apply the knowledge in different contexts and work situations. A machine operator is 'skilled' if they have substantive knowledge about the product and how to operate the machine to produce the product. Similarly, Christopher Winch (2011) argues that a skilled worker possesses the knowledge and the know-how appropriate to the task at hand; skill is used in a similar way to know-how and technique.

Following the ideas of Freidson and Winch, one could state that qualifications indicate (at least in theory) that the person knows the formal rules of discourse (know-that) and that they can apply these rules to performing a task. Employers also rely on informal

assessment measures and the actual performance of a task to ascertain skill. Many employers may argue that possession of a qualification is a necessary condition but is not sufficient; it is not a sufficient indicator of the ability to perform work. This requires a well-structured and guided work experience.

All of the above provides an initial indication of the extent to which the meaning of 'skill' is complex yet policy-makers, in their desire to represent it as a simple, technical concept, treat it as uniformly understood (Warhurst et al., 2017), whether in education, employment, skills policy and initiatives of economic development. In a comprehensive study focused on adult literacy in 21 countries, it was found that there was no direct relationship between the level of educational attainment and literacy level (Massing & Schneider, 2017). The study found that various factors influenced adult literacy: from parental education and language at home to their occupation and years of experience (Massing & Schneider, 2017). This suggests that due caution should be applied when attempting to make a direct correlation between skill and qualification.

A different reason why qualifications do not correlate with skill is related to how qualifications are ranked in labour markets. Although the qualification system may suggest equality or equivalence, this does not always hold: the ways in which qualifications are valued in labour markets are affected by a range of factors (including the power relations mentioned above), as well as social perceptions, and labour market outcomes. For example, although in most classification systems a vocational qualification is ranked at the same level as a general education qualification, this by no means entails that employers or the broader society hold the same position. This observation works in both ways: employers use qualifications as indicators or proxies for 'skill' or suitability for the workplace but more than often have unrealistic expectations regarding entry-level employees, and in refusal to take qualifications seriously they undermine education as preparation for work.

Having stated the complexity of the relationship between skill and qualifications, the rule of thumb is that highly regulated occupations have a better match between their level of education and the skill required to do their work well. This is not the case with graduates from vocational streams of education and training and academic streams

of education and training. In unregulated occupations (clerical, management consultant, financial analyst, construction project manager etc.), employers may apply qualifications as a proxy for potential, social status, or a variety of other traits other than knowledge and attributes.

Many of the current interventions tend to focus on short term needs of skill development. They focus on workplace tasks that relate to current workplaces: units, or competency standards, are developed based on employers' specifications of tasks. This focus on short term interventions is related to a belief that competency-based training reforms and qualifications frameworks will create a better match between education and work. This approach undermines the complexity of curriculum development and the ways in which knowledge and skills need to be acquired for work.

4. Occupational Classification Systems

4.1 Introduction

What is the purpose of classification systems?

The International Labour Organisation (hereafter ILO) states the following: An occupational classification is a tool for organising all jobs in an establishment, an industry or a country into a clearly defined set of groups according to the tasks and duties are undertaken in the job. It normally consists of two components:

- a classification system, which provides guidelines on how jobs are to be classified and how these groups are to be further aggregated into broader groups. It includes the occupational titles and codes and describes the different tasks and duties associated with the group.
- a descriptive component, which describes the tasks and duties (sometimes the goods and services produced as well), skill level and specialization, and entry requirements.

The primary underlying justification utilised to classify occupations is that of skills. Specifically, skill level and skill specialisation. The logic is that the higher the skill level,

and the higher the degree of specialisation, the higher up on the hierarchy the occupation is located.

Many countries, including South Africa, utilise (to varying degrees and for diverse purposes) the ILO’s International Standard Classification of Occupations version 2008 (hereafter ISCO-08) as either their primary or foundational occupational classification system (Tijdens & Kaandorp,2018). This section covers occupational classifications systems most relevant to the public service sector in South Africa and the PSETA in particular. The focus is on the OFO, used as a labour market intelligence tool by DHET and associated bodies, and the OCS, used within the public service sector. Before presenting the OFO, a look at what is considered a relatively comprehensive classification system of occupations: the O-Net system is required. Figure 1 shows each of the occupations contained on O-Net (O-Net,2022) and categories of information, these include worker characteristics, worker requirements, experience requirements, occupational requirements, workforce characteristics, and occupation-specific information.

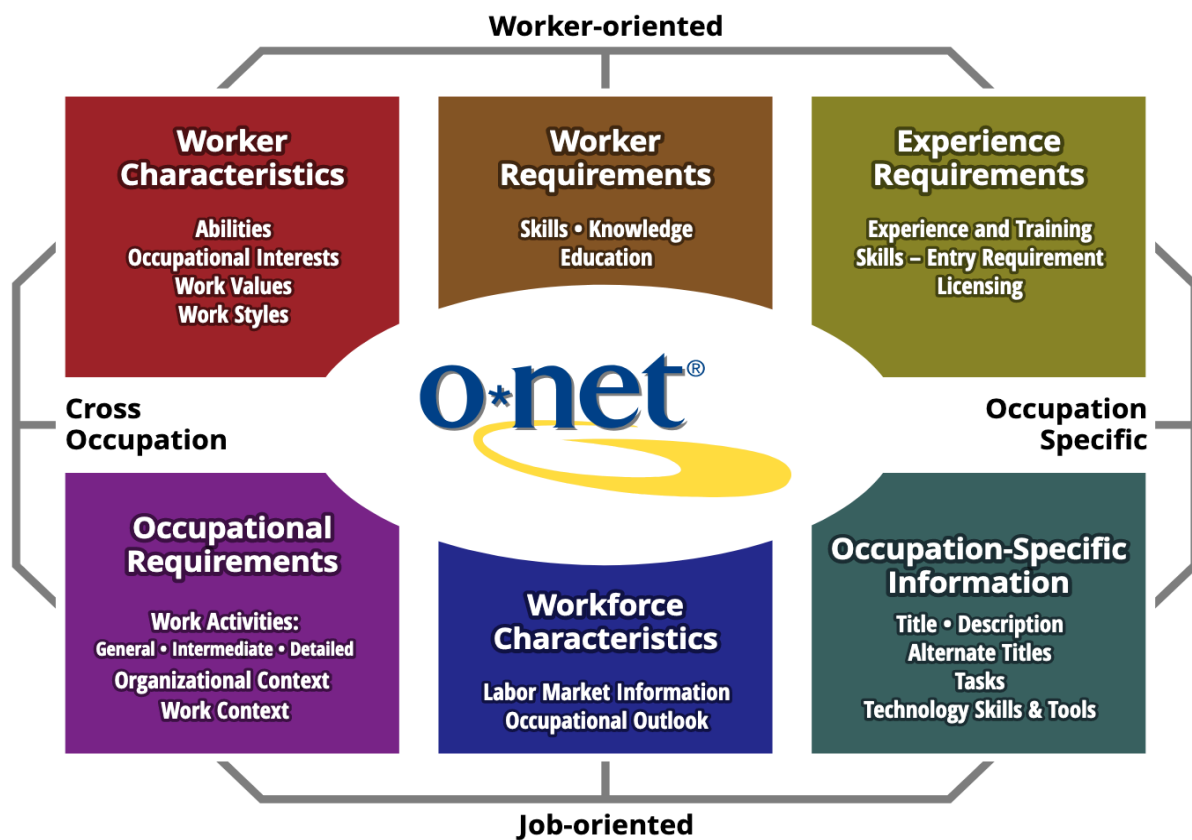


Figure 1 ONET Source: Handel (2016)

4.2 ISCO-08

Many countries utilise ISCO-08 as a macro-level labour market intelligence tool and for international reporting. The OFO is based directly on ISCO-08. ISCO-08 is a four-level hierarchically structured classification system that “allows all jobs in the world to be classified into 436-unit groups” (ILO, 2012). ISCO is structured in terms of two core features, skill level, and skill specialisation. Skill level is used to rank occupations, while skill specialisation is used to categorise them. The resulting classification system consists of 130 minor groups, 43 sub-major groups and 10 major groups (ILO, 2012).

ISCO defines a job as a set of tasks or duties performed by one person for employment or self-employment (ILO, 2012). An occupation is a set of jobs sharing similar main tasks. A skill is the ability to carry out tasks within a particular job (ILO, 2012).

Skill level in ISCO-08 relates to the complexity of the tasks within a particular job, and includes consideration of:

- The nature of work relative to other tasks and duties within the same skill level;
- The level of formal education required to perform the tasks within a particular job;
- And the amount of experience or on the job training required to competently complete tasks (ILO, 2012).

ISCO includes 4 skill levels. Occupations at **skill level 1** typically involve the performance of simple, routine physical or manual tasks, and may require physical strength and endurance. Some level of literacy or numeracy may be required, but should not form a major component of the job. Some occupations at skill level 1 may require the completion of the first stage of basic education, and possibly a short period of on the job training (ILO, 2012).

Skill level 2 occupations generally involve tasks such as operating machinery and electronic equipment, driving vehicles, maintenance and repair of electrical and mechanical equipment, and the manipulation, ordering, and storage of information. These occupations are likely to require more advanced levels of literacy and numeracy, and good communication skills. These occupations generally require the completion of at least the first stage of secondary education but may require the

completion of the second stage of secondary education and extensive on the job training (ILO, 2012).

Occupations at **skill level 3** involve the performance of complex technical and practical tasks that require extensive knowledge of a particular field. These occupations generally require a high level of literacy and numeracy, including the ability to understand complex written material, prepare factual reports and communicate verbally in difficult circumstances (ILO, 2012). These occupations usually require knowledge and skills obtained through 1 – 3 years of post-secondary education, and in some cases may require extensive relevant work experience and on the job training (ILO, 2012).

Finally, occupations at **skill level 4** usually involve the performance of tasks that require complex problem-solving, decision-making, and creativity, based on extensive theoretical and factual knowledge of a particular field. These occupations require extended levels of literacy and numeracy and excellent interpersonal communication skills. The knowledge and skills required for these occupations usually require study at higher educational institutions for 3 – 6 years, leading to the award of a first degree or higher qualification. In some cases, extensive experience or on the job training may substitute for formal education or may be required in addition to it (ILO, 2012).

Skills specialisation focuses on the field of knowledge required to perform requisite tasks; the tools and machinery used; and the kind of product or service produced (ILO, 2012). The ten major groups mapped to their relevant skill levels are shown in Table 1.

Major groups	Skills level
1 – Managers	3 + 4
2 – Professionals	4
3 – Technicians and associate professionals	3
4 – Clerical support workers	2
5 – Services and sales workers	2
6 – Skilled agricultural, forestry, and fishery workers	2
7 – Craft and related trades workers	2
8 – Plant and machine operators, and assemblers	1
9 - Elementary occupations	1
0 – Military occupations	1 + 2 + 4

Table 1 ISCO-8 Major groups and skill levels

The categorisations of occupations are primarily based on similarities in the tasks, jobs, and skills specialisations within them, rather than skill levels. So skill levels cluster within groups due to similarities in the jobs and tasks comprising them, but occupation group does not determine skill levels. Different occupations have differing requirements in terms of the actual work performed in them, and it is unlikely that a single occupation will require employees to be skilled to the highest level possible across all 10 categories of the level descriptor (Allais, 2014). For example, the medical profession would not have qualifications at levels 1, 2, or 3 of the qualifications framework, while carpentry may not have qualifications at higher levels.

Strengths of ISCO-08

- ISCO-8 takes the middle road, it is not too complex or difficult to operationalise and utilize to generate macro-level occupational data for statistical and national human resource purposes (gender, occupational health and safety, immigration etc.)
- The occupations available are conceptualised at a sound level of generality allowing them to be applied in multiple diverse national contexts.
- ISCO-08's international comparability makes it possible for countries without occupational classification systems to use it for their purposes and the fact that many countries in the world draw from it increases the likelihood of comparing skills dynamics across countries (although this can be a negative as well since although we find ourselves in a globalised economy there are still regional, national differences.
- The focus on title and tasks provides just enough information per occupation to be useful for the generation of national occupational data. Nevertheless, considering the contestation surrounding skill level and skill specialisation its utility for skills planning/forecasting is highly debatable.
- Experience: Though ISCO-08 identifies in the actual definitions of each skill level previous experience in a related occupation required for competent performance of the tasks and duties, as one of the dimensions of skill level, it speaks only of the possibility of experience substituting for education. Experience is not identified as a possible requirement in itself, potentially an additional requirement that could justify a higher skill level. This can have an impact on the skill level placement of

occupations fed through internal job ladders, specifically, for example, supervisors, who may require years of experience in the jobs of those they supervise.

4.3 The Organising Framework of Occupations (OFO)

The OFO is made up of 8 Major groups, 39 Sub-major groups, 125 Minor groups, and 440 Unit groups which encapsulate 1507 occupations (DHET, 2017). Like ISCO, the OFO uses skills as the fundamental organising concept, with skill level and skill specialisation providing the means of ranking and classifying skills respectively (DHET, 2017).

The OFO definition of 'skill level' is related to the complexity and range of tasks and duties to be performed in a particular occupation (DHET, 2017). This dimension uses essentially the same definition of skill levels as ISCO-08, with the level of a skill being dependent on:

- the nature of the work performed, i.e. the complexity and range of the work in an occupation concerning the characteristic tasks and duties identified;
- the level of formal education required for competent performance of the tasks and duties of the job;
- the amount of on-the-job training or experience required for competent performance of the tasks and duties.

Skill specialisation is considered in terms of four concepts:

Skills specialisation is also defined similarly to ISCO-08, in terms of field of knowledge, tools and machinery used, materials worked on, and types of goods and products produced (DHET,2017).

The Major Occupation Groups defined by the OFO are shown in Table 2.

Major groups	Skills level
1 – Managers, senior officials, and legislators	3 + 4
2 – Professionals	4
3 – Technicians and associate professionals	3
4 – Clerks	2
5 – Service and sales workers	2
6 – Skilled agricultural, craft, and related trade workers	2
7 – Plant and machine operators and assemblers	2
8 – Elementary occupations	1
0 – Military occupations	1 + 4

Table 2 Major groups in the OFO (DHET, 2017)

These levels are very similar to that of ISCO. However, an important innovation in the OFO is the development of an occupational mapping tool that supports employers, SETAs and other stakeholders to map jobs to occupations (Ramsarup, 2020). This is considered to be important because it is intended to “allow more accurate occupational data to be provided to the SETAs to assist with skills planning processes” (Ramsarup, 2020) to provide a mechanism for articulating labour market demand. This is premised on the understanding that if the education sector is unable to understand the nature and extent of demand for skills in the labour market, it cannot provide the right skills to meet this demand timeously (Ramsarup, 2020). The OFO has therefore been described by many policymakers as an important means of linking the education sector to the world of work.

In terms of the grouping of occupations, there is a movement from general to specific—from ‘major groups’ to ‘occupation’. Specialisations for the occupation are also listed if they are applicable. The logic of moving from general to specific is replicated throughout the entire OFO and in terms of occupational classification systems, this is a common practice internationally as most systems are based (to varying degrees) on ISCO-08.

Similar occupations are grouped together (such as business sciences and administration). In the below example manager is the most general category with finance manager being the most specific (i.e. the individual occupation):

Manager (1)>Administrative and Commercial Managers (12)>Business Sciences and Administration Managers (121)>Finance Managers (1221)>Finance Manager (121101)

Important points raised for discussion include:

1. There are no tasks at the individual occupational level. Tasks are only provided at the unit group level. The simplest way to describe the unit group level would be that a unit group is a family of closely related occupations. The OFO provides task descriptions to a group of occupations, although its most specific category of classification is occupation/specialisation.
2. What level of detail is required to more precisely understand the 'nature of the work performed?' It is most likely that the nature of the work of a specific specialisation will change from one work context to another. Descriptions cannot be too detailed or too broad. The understanding of the nature of work cannot be prescribed by any tool of classification. It is possible that interviews with a representative sample of those practising in a given occupation, within a specific context (such as a national government department) and with people of other occupations who interact regularly with the occupation, will be necessary.
3. Job adverts can also provide a good reference point to understand both the nature of the work as well as its entry requirement.

The trial of the framework developed for this research project in the form of stakeholder workshops will assist the PSETA in its efforts to navigate these complexities. It could also provide the basis for a more comprehensive and detailed understanding of the interconnections (or lack thereof) between a given occupation and qualification.

4.4 The Occupational Classification System (OCS)

The Department of Public Service and Administration's (DPSA) occupational classification system aptly named the 'OCS', is an occupational classification system that was developed by the DPSA considering the new Public Service Regulations (1999). Along with the Code of Remuneration (COREs), a new compensation management system, the OCS seeks to replace the old Personnel Administration

Standards (PAS) which were the system used to classify occupations and determine remuneration and grading in the public sector in the apartheid dispensation.

According to the DPSA, the purpose of the OCS is to capture more detailed information on occupational structure, thus providing a new set of occupational categories for the public service. The OCS is based on the International Standard Classification of Occupations (ISCO-88) and mirrors the conceptual framework that is used in ISCO-88 to construct and justify the hierarchy of occupations inherent within it. ISCO-88 is an earlier version of ISCO-08. This conceptual framework is based on two main concepts: the concept of the kind of work performed or 'job' and the concept of 'skill'. The concept of job is defined as a set of tasks and duties executed, or meant to be executed, by one person. A set of jobs whose main tasks and duties are characterized by a high degree of similarity constitutes an occupation. The concept of skill is defined as the ability to carry out the tasks and duties of a given job and is further understood as the aggregate of two dimensions, skill level and skill specialization which are a function of the complexity and range of the tasks and duties involved and the field of knowledge required, the tools and machinery used, the materials worked on or with, as well as the kinds of goods and services produced respectively.

Based on this skill concept, occupational groups are delineated and aggregated according to four skill levels which are given operational definitions according to the educational categories and levels which appear in the International Standard Classification of Education (ISCED). These skill levels are arranged in order of increasing complexity, with occupational groups at skill level 1 being the lowest on the hierarchy and occupational groups at skill level 4 being the highest on the hierarchy.

Skill level 1 is defined with reference to ISCED category 1, comprising primary education which generally begins at the age of 5, 6 or 7 and lasts about five years.

Skill level 2 is defined with reference to ISCED categories 2 and 3, comprising the first and second stages of secondary education. The first stage begins at the age of 11 or 12 and lasts about three years, while the second stage begins at the age of 14 or 15 and also lasts about three years. A period of on-the-job training and experience may be necessary, sometimes formalized in apprenticeships.

Skill level 3 is defined with reference to ISCED category 5, (category 4 in ISCED has been deliberately left without content) comprising education that begins at the age of 17 or 18, lasts about four years, and leads to an award that is not equivalent to a first university degree.

Skill level 4 is defined with reference to ISCED categories 6 and 7, comprising education that also begins at the age of 17 or 18, lasts about three, four or more years, and leads to a university or postgraduate university degree, or the equivalent.

According to the DPSA, the use of skill levels does not imply that the skills necessary to perform the tasks and duties of a given job can be acquired only through formal education, but the skills may be and often are, acquired through informal training and experience. While this last point is important, it is not elaborated on in the OCS. Since the OCS is specific to the public service, occupations such as hawkers, bankers, street vendors etc., have been excluded from the classification system.

Following the above, the structure of the OCS is defined as a pyramid whose hierarchical structure consists of ten major groups at the top level of aggregation, subdivided into 36 sub-major groups, 96 minor groups, 93 unit groups and 19 sub-unit groups. The ten major groups are Elementary Occupations, Administrative Office Workers, Professionals and Managers, Technicians and Associated Professionals, Service Workers, Social, Natural, Technical and Medical Sciences Supplementary and Support Personnel, Craft and Related Trades Workers, Drivers, Operators and Ships' Crew, National Security Services and Custodian Personnel and Information Technology Personnel. Of the ten major groups, nine have been linked to skill levels except for Major Group I (National Security Services and Custodian Personnel). The reason for this was that based on information from national sources, skills for executing tasks and duties of occupations belonging to this major group vary to such an extent that it would be impossible to link them with any of the four broad skill levels.

As mentioned earlier, the skill levels were given operational definitions by reference to the educational categories and levels of the International Standard Classification of Education. Table 3 below gives a synopsis of the ten OCS major groups with their associated skill level, along with the number of subgroups within them. It is not clear why some of the major groups on the OCS do not have all the subgroups.

MAJOR GROUPS WITH NUMBER OF SUB-GROUPS AND SKILL LEVELS					
MAJOR GROUPS	SUB-MAJOR GROUPS	MINOR GROUPS	UNIT GROUPS	SUB-UNIT GROUPS	SKILL LEVEL
A.Elementary occupations	4	11			1 st
B.Administrative Office Workers:	1	2	9		2 nd – 3 rd
•Clerks and related personnel	1	4			3 rd – 4 th
•Administrative Policy and related personnel					
C.Professionals and Managers	6	23	54	19	4 th
D.Technicians and Associate Professionals	2	6	25		3 rd - 4 th
E.Service Workers	5	8			2 nd
F.Social, Natural, Technical and Medical Sciences Supplementary and Support Personnel	2	5			2 nd
G.Craft and Related Trade Workers	5	20			2 nd - 3 rd
H.Drivers, operators and ships' crew	4	11	5		2 nd - 3 rd
I.National Security Services and custodian personnel	3	3			-
J.Information Technology Personnel	3	3			3 rd

Table 3 OCS Major groups with Number of Sub groups and Skill level

5. Qualification Classification Systems: NQF

As established in previous sections, and this will be further explored and developed during the next phases of this project, there may not always be a direct and simple relationship between occupation, skill and formal education. Nonetheless, the best system available, at present, to broadly classify specifically qualifications is the National Qualifications Framework (hereafter NQF). The primary focus of this section of the report will be the NQF. This is not to say that the NQF is unproblematic. Rigorous analysis, also drawing on comparison with numerous other countries, has clearly illustrated the substantive issues (mainly related to the fact that the NQF is outcomes-based; amongst others) with the NQF (Allais, 2007).

South Africa introduced a National Qualifications Framework (NQF) in 1995 intending to create a more egalitarian education system (Allais, 2011). The NQF was designed

as a single integrated system for the “classification, registration, publication and articulation of quality assured national qualifications” (South African Government, 2010). The original NQF was conceived of as a hierarchy of 8 levels, in terms of which new qualifications would be registered. This, policy makers hoped, would create some degree of equivalence between different qualifications at the same level.

The framework originally had 8 levels; it was later increased to 10. Inherent in the idea of a qualifications framework is a hierarchy of levels of learning. And inherent in any educational process is a notion of progression from simple to more complex. The framework attempted to create a coherent hierarchy by creating a series of ten levels of descriptors of learning achievement. The learning descriptors¹ are intended to provide a broad indication of the outcomes that are appropriate for a qualification at that level (South African Government, 2010). If this worked, level descriptors would ensure coherence across the allocation of qualifications to particular levels and facilitate the comparability of qualifications nationally and internationally (SAQA, 2015).

Each NQF level is described in terms of ten ‘applied competencies’ (SAQA, 2015), which include: Scope of knowledge; Knowledge literacy; Method and procedure; Problem-solving; Ethics and professional practice; Accessing, processing and managing information; Producing and communicating of information; Context and systems; Management of learning; and, Accountability.

There were many problems with the original design of the NQF (Allais, 2007, 2011). As indicated, the original NQF was changed to have 10 levels and a set of three sub-frameworks that cover basic education (the General and Further Education and Training Sub-Framework), higher education (The Higher Education Qualifications

¹ Herewith a link to the official SAQA document which constitutes a detailed description of NQF level descriptors. https://www.saqa.org.za/sites/default/files/2019-11/level_descriptors.pdf

Sub-Framework), and technical education (the Occupational Qualifications Sub-Framework) (SAQA, 2015).

The intention is that the statement of learning achievement and its associated level descriptors provide a broad indication of the outcomes that are appropriate for a qualification at that level (South African Government, 2010). These level descriptors aim to ensure coherence in the allocation of qualifications to particular levels and to facilitate the comparability of qualifications nationally and internationally (SAQA, 2015). To achieve these aims of coherence and comparability, the level descriptors are intended to provide a basis from which more specific descriptors can be developed for specific fields or disciplines and are designed to meet the needs of both academic and occupational qualifications (SAQA, 2015). The level descriptors are therefore intended to apply to learning in a variety of contexts, across all three of the sub-frameworks of the NQF (SAQA, 2015). SAQA documents indicate that the descriptors are not meant to be prescriptive, but rather that they aim to describe the requisite levels of learning achievement relevant to qualifications at particular levels of the NQF (SAQA, 2015).

The development and use of 'levels' and level descriptors in the NQF and across qualification frameworks globally illustrates the complexity in this regard. At the broadest level, the differences between qualifications within particular hierarchical classification systems are clear: for example, a PhD will be 'higher' than a Bachelor's degree. However, it is more challenging to make judgements about more specific levels of comparability of 'difficulty' between qualifications at particular levels within qualifications frameworks (Allais, 2014).

As can be seen from the above the NQF, even *before* attempts are made to align it with occupations, has its shortcomings. At an even more fundamental level, it could be argued that the NQF is primarily concerned with providing a coherent framework with which to organise the domain of formal education. The domain of education (in its entirety in the South African context) is, however, immensely diverse and complex, with its logic and purposes dependant on a range of considerations. Seeking an alignment with the domain of occupations is certainly not a straightforward process.

Potentially, the only instances where an alignment between occupation and qualification could be less problematic are occupations that are highly regulated (by professional associations or occupational bodies) and where there are well-established pathways (at the entry-level at least) from the domain of formal education into the occupation and the world of work (e.g., accounting). Even for such occupations, various unforeseen complexities could arise in the occupation-qualification nexus. One of which is the context within which the occupation operates. Engagement with PSETA stakeholders could, for example, reveal that the very 'nature of the work performed' in national and/or provincial government departments are, to an extent, qualitatively different from accounting work performed in the private sector.

6. Analysis and Key Insights for the mapping framework

The examination of how occupations are mapped onto qualifications systems raises issues because of the **form of classification** offered by the OFO and the NQF, respectively. Both the OFO and the NQF use 'skill' and 'competences' (conceptual and practical) to define the meaning of occupation (in the case of the OFO) and to grade levels of achievement (in the case of the NQF). The OFO is a skills-based coded classification of occupations at a task level. Level descriptors in the NQF are meant to function as indicators of competency that capture the qualities and abilities that should be achieved by all learners who qualify at a particular level within the framework and are intended to grade formal educational achievements (Marock 2011, Allais, 2014). Education providers are expected to plan curricula aligned to the level descriptors and notional time specified by the NQF.

The OFO distinguishes occupations primarily concerning the scope and nature of the work performed. Understanding of skill (and skill levels) follows an occupational logic whereby essential tasks of the occupation are clustered. Occupations differ in terms of the nature and scope of their essential tasks, with 'complexity' being the main deciding factor regarding 4 skill levels. The NQF uses lists of competences that are set on 10 educational levels ranging from certificates and diplomas to higher degrees. The extent to which people use the NQF level descriptors in planning qualifications is in question (Allais, 2014).

In the crudest and broadest sense of mapping, the OFO presents its 8 major occupational groups against the 10 levels of the NQF. This mapping creates an occupational hierarchy (from 'elementary' occupations at the bottom and 'professionals' and 'managers' at the top) between the different major groups. This is illustrated schematically in the following diagram produced by DHET in Figure 2

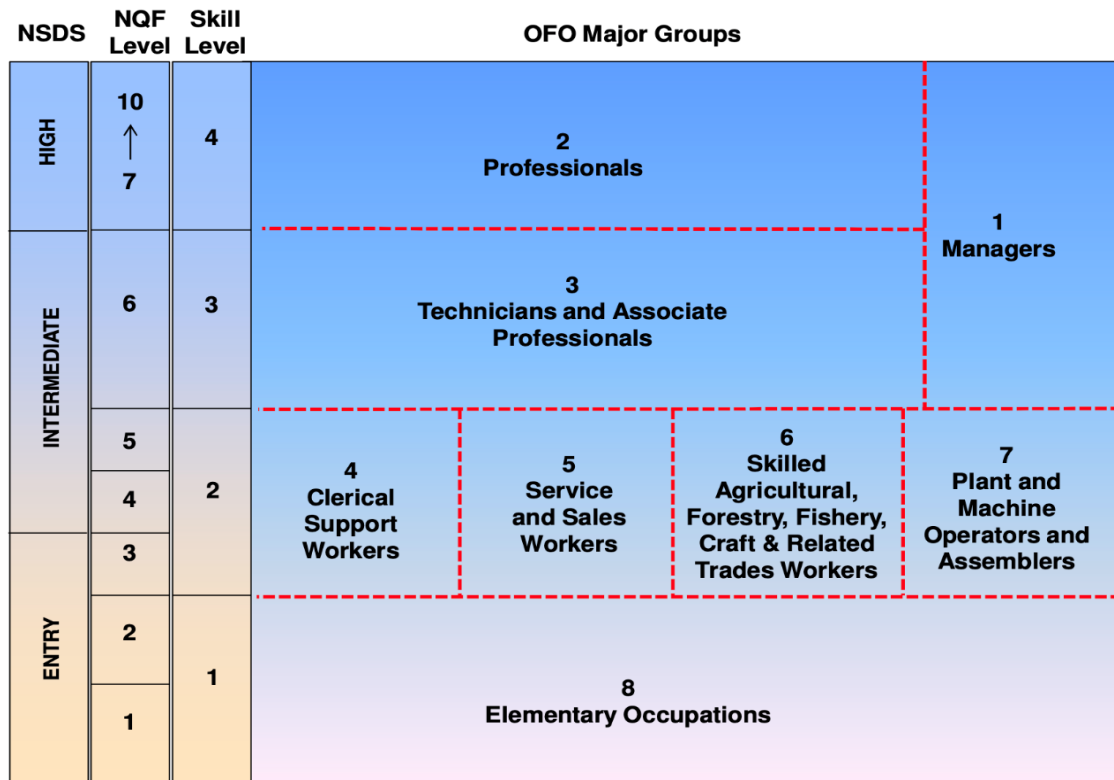


Figure 2 Synchronisation of the NSDS Levels, NQF Levels, Skills Levels, and OFO Major groups

From the perspective of the OFO, the idea of mapping is about aligning occupations to qualifications (also considering additional information) with the view of identifying skill needs. The OFO offers three criteria (nature of the work; level of formal education and on-the-job training or experience). From the perspective of the NQF, the idea of mapping is about specifying qualifications required at an entry-level occupation and for progressing in the occupation (and between occupations) over time. The NQF offers formal education levels and their associated level descriptors of competences as criteria. Somehow the two sides of the story are meant to meet in the same conceptual place: employers and bodies which represent occupations who think in

terms of the tasks and duties required by a job and education providers who think in terms of what knowledge (theoretical and practical) is required to prepare for work need to meet in the same conceptual space. By 'the same conceptual space' it is meant that, ideally, employers and educators understand the occupation in the same way and agree on its essential tasks and its education pathway. There are, however, factors that interfere with the idea of a common conceptual space. Some factors are endemic to the form of the respective classification frameworks, and some are external to the frameworks and relate to socio-economic considerations.

The main factor endemic to the form of the respective classification frameworks is the idea that occupation or education can be described through skills and competences. Many arguments have already been written against this and those will not be repeated here. The point to raise is that the idea of competence or skill, as commonly utilised, is vague.

First, there are multiple uses and meanings for skill and or competency. Disciplines of knowledge (sociology, psychology, economics) define the meaning of skill differently. Second, there is no one way to match a job task to one skill or one kind of competence; some job tasks require more complex sets of skills than others and yet the mapping needs to come to a firm conclusion about the nature of the occupation (its essence; its skill level), its level in relation to other occupations (its complexity and its place in the hierarchy of the major groups). Third, as occupations change over time due to social, technological and a whole range of other forces acting singly or in conjunction, the complexity of a set of tasks in an occupation will change depending on technological innovations. Fourth, there is circularity in the way occupational complexity and educational levels of achievement are related to each other. For an outsider (or even for an employer) to understand the growth or reduction of task complexity, the OFO offers 4 skill levels, which, in turn, are defined in educational terms. Although the OFO offers clusters of tasks as one criterion of a skill level (and years of experience) since this cluster cannot be measured precisely, its associated educational levels (in tandem with the NQF) determine the place of the occupation in the major groups. The main difference is whether the cluster collates around tasks that can be learned on the job or with short educational preparation (technical physical task types) or require longer and higher levels of education (technical mental task types).

The former cluster is collated around basic and secondary education and the latter cluster is collated around post-secondary and tertiary education. If this is correct, a question arises whether the list of tasks associated with the Unit group on the OFO has any substantial purpose in the mapping process. Educational levels seem to matter more. Fifth, although educational levels appear to be clearer than a cluster of tasks, they contain their own problems in the role played by level descriptors: How much is entailed in 'a basic understanding', and how much in a 'fundamental understanding'?

Extensive research demonstrates that Level descriptors on the NQF add little value (Allais et al., 2007; Allais, 2012). In labour markets, widely understood qualifications tend to function as implicit benchmarks themselves, rather than as actual applications of level descriptors (Allais, 2014). This de facto use of qualifications rather than level descriptors is a result of many problems such as over and/or under specifications. They are also linked to the circular relationship between learning time (notional hours) and the hierarchical classification of qualifications which is extended into the relationship between qualifications frameworks and occupational classification systems, where learning time is frequently invoked as a fundamental means of ranking occupations.

All the above make the mapping exercise tricky and imprecise. This means that professional judgement must be used in mapping the cluster of tasks of occupation to its various specialisations (the OFO provides lists of tasks and level descriptors at a Unit level not at the more specific specialisations of the occupation) and to the qualification system (the NQF).

That this is so, that skill and competence concerning occupational tasks are not easily defined and that mapping is a complex process that requires professional expertise and judgement can be proven by the following observations:

1. Managers can be mapped onto two different OFO levels (3 or 4) and four NQF levels (6-10). Professionals are classified on OFO level 4 and three NQF levels. This suggests that several sources of information influence the mapping practice not all of which are internal to the OFO and/or the NQF.

2. There are several occupational classification systems that the literature refers to and which are in use (OFO, OCS and South African Standard Classification of Occupations i.e. SASCO). Professional bodies also classify the occupation they regulate. If skills and competence were clear descriptors, it is unlikely that there would be a need for several occupational classifications.

There are also socio-economic factors that affect the mapping process, and these include labour market scarcity and equity questions. The ways in which qualifications are valued in labour markets are affected by a range of factors (including the power relations mentioned above), as well as social perceptions, and labour market outcomes. For example, if the NQF states that a vocational qualification is at the same level as a general education qualification, this by no means entails that employers or the broader society hold the same position. While there is a theoretical relationship between NQF levels, such that qualifications at the same level should be comparable in terms of the hierarchy of skills and competencies required to achieve them, there is a de facto hierarchical difference between the general and technical qualifications in the NQF in the labour market.

7. A Framework to Examine the Occupation-Qualification Nexus

As it was crucial to understand the various classifications systems and to bring them together in a coherent manner this urged the development of a mapping framework. The purpose of creating the occupation and qualification mapping framework is to provide as broad a framework as possible, to better understand occupations, to identify gaps in occupational and qualifications information and to consider labour market and contextual information to support skills planning including deciding on relevant PSETA interventions.

7.1 Principles of the mapping framework

The Framework constructed is based on a set of guiding principles as seen in Figure 3 below.

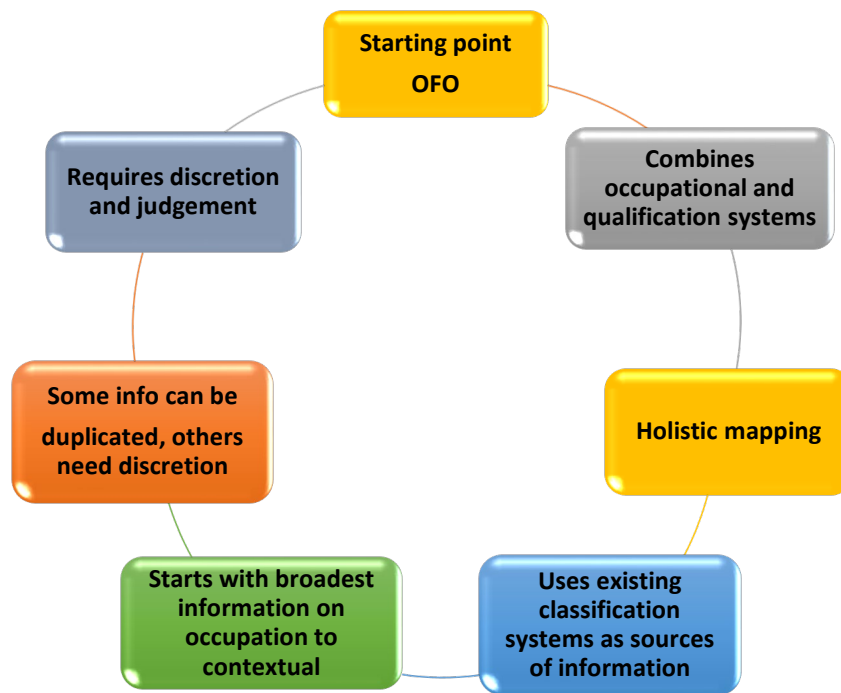


Figure 3 Principles of the Occupation and Qualification Framework

During later phases of the project, additional information will be incorporated which will lead to either an expansion or contraction of the preliminary framework presented here. Engagement with PSETA stakeholders will also be required, in the form of workshops, to establish whether or not the mapping framework is user friendly and efficient, and what needs to change. This is necessary as PSETA stakeholders, especially employees and HR officials within national and provincial government departments, have the requisite in-depth occupation-specific expertise. This includes an understanding of the occupation itself and the context within which it is embedded. What is presented below is therefore a draft or working framework.

Figure 3 illustrates the principles of the framework which will support users with navigating the framework. The principles of the framework

1. is based on the OFO classification and starts from the point of distinguishing occupational levels;
2. incorporates both occupational and qualification classifications.
3. provides a holistic way of mapping an occupation but also uses the existing format of classification (skill/task-based classification);

4. includes existing classifications systems so that comparisons can be made across different systems. This is particularly important for getting a sense of the essence of the occupation in terms of a cluster of tasks and comparing the entry requirements to an occupation. The main systems we included in this framework are the OFO, OCS, NQF, professional bodies if available, job adverts, National Career Advisory Portal (NCAP);
5. starts from the broadest type of information on an occupation (policy-based and generally government-stipulated) and ends with the most specific contextual information;
6. includes broad and more specific contextual information, which take into account labour market information as well as geographical and socio-economic variations; and
7. suggests where discretion and judgement are required and when information can be transported straight from any of the existing systems;

7.2 Operationalising the mapping framework

The research team worked within the current OFO structure and used the latest version of OFO: OFO 2021 and The DHET Guidelines: OFO Mapping 2017.

This mapping framework developed for the PSETA has been structured to start with an OFO occupation and move from a general understanding of the occupation to specific contextual information. This is an important step when developing an illustration of the various sources of information with which to understand a particular occupation, its associated qualifications, and the labour market and contextual dynamics affecting it.

Typically, however, the mapping of jobs to OFO occupations at an employer organisation level (such as a provincial or national department), starts with the job description/part there-of (not searching by similarity with the title) and not, as we have done in this Framework, with the OFO Occupation. This entails understanding the essence and core purpose of the job and key tasks/duties. In finding the 'best match' of the job to occupation the framework seeks to find information on the job title and its

core purpose, from different classification systems and public sources (such as job descriptions).

To streamline the decision-making process which the user will undergo, a support tool using a decision tree can be found in Figure 4 below. This decision tree is intended to prevent the possibility of adverse consequences which could result from decisions being made in an ad-hoc fashion for purpose of sheer compliance.

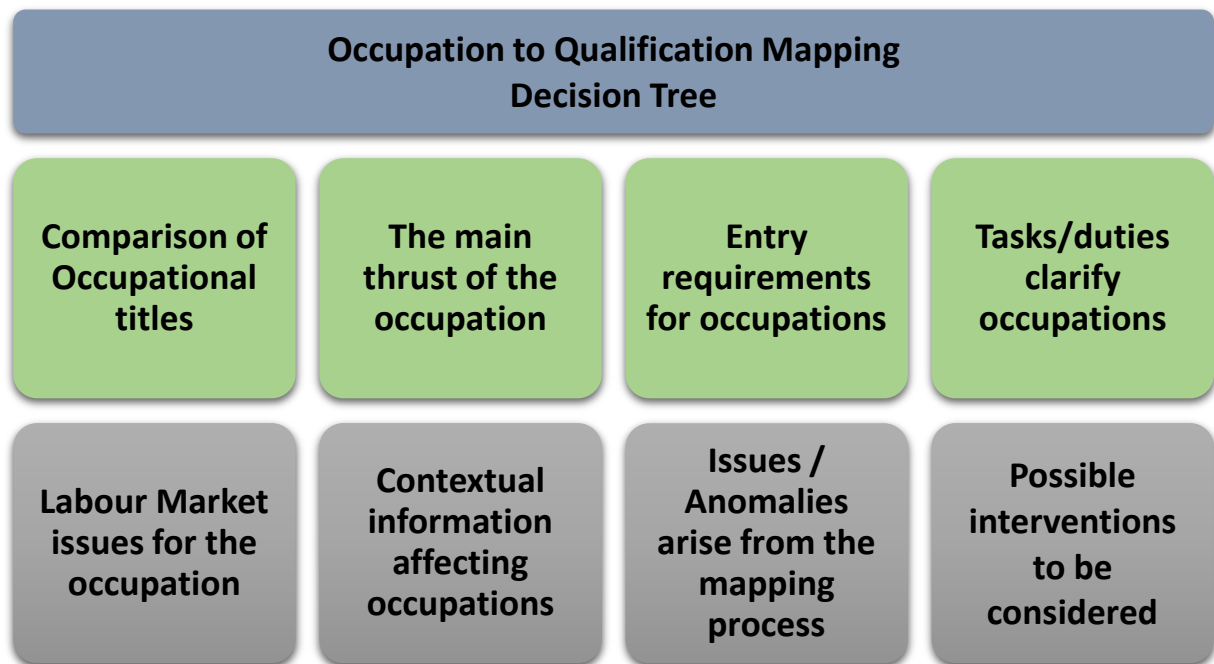


Figure 4 Decisions when mapping occupations to qualifications

Figure 4 illustrates that there are eight steps in the mapping process, each is formulated as a question: The eight questions are:

1. What does the comparison of occupational titles tell us?
2. What is the main thrust of the occupation?
3. What does entry requirements say about the occupation and its specific specialisations?
4. What tasks/duties characterise the essence of the occupation?
5. What do sources of the labour market say about the occupation?
6. In which ways does contextual information affect the occupation?
7. What issues/anomalies arise from the mapping process?

8. What are the possible interventions which can be considered to address the skills that need to be identified?

The first deliberation is **around occupational titles**. In the attached Excel spreadsheet columns, A, B, C, and D captures the occupation/job title, see Figure 5. It indicates that different sources such as the OFO, professional bodies and OCS are explored to see how occupation titles may differ or be similar.

A	B	C	D
OFO Major group; Submajor group; Minor group; Unit group	OFO Occupation sub-division of the Unit Groups, The OFO lists several occupations from the Unit Group. The OFO distinguishes occupations in the same unit group based on uniqueness of the output of the occupation usually due to specific skills and knowledge.	Professional title This is the title which a professional body or association may give to a specific occupation. Is the title the same as the OFO occupation title/s?	OCS job title/s This is the title that the OCS and or PSETA may give to this occupation? Is the title the same as the OFO occupation title/s?
Managers (2021-1); Administrative and Commercial Managers (2021-12); Business Services and Administration Managers (2021-121); Finance Managers (2021-1211)	Finance Manager (2021-121101)	Chartered Accountant Finance manager	Senior State accountant

Figure 5 Columns A-D considering occupational titles

Column A requires details from the OFO, here the Major group, Sub major group, Minor group and Unit group is captured (see an example of Finance Manager in 4). Column B requires the OFO occupation which is a sub-division of the Unit Group. This is because the OFO lists several occupations from the Unit Group and distinguishes occupations in the same Unit Group based on the uniqueness of the output of the occupation usually due to specific skills and knowledge. Column C requires information from professional bodies or associations if they exist for a particular occupation. This will be the title that a professional body or association may give to a specific occupation (and/or specialisation). A question that can be asked is, “whether the title is the same as the OFO occupation title/s and if not what possible information does it add to the essence of the occupation?”. Column D requires the title which exists on the OCS, this is the title that the public service and or PSETA may give to the

occupation. In the case of comparing titles on columns A – D, the user will merely duplicate the stated title for comparison.

The second set of deliberation is around the **main thrust of the occupation**. In the attached Excel spreadsheet columns, E, F, G, H and I capture learning areas, descriptions and specialisations which point to the main thrust of the occupation, see Figure 6.

E	F	G	H	I
<p>NQF Learning Subfield Intended for understanding the main thrust of the occupation.</p>	<p>Learning subfield The learning subfield of each occupation under the unit group should be specified. Intended for understanding the main thrust of the occupation.</p>	<p>OFO Unit group descriptor Intended for understanding the main thrust of the occupation.</p>	<p>OFO Specialisations According to the OFO an occupation can be further divided into several different specialisations, depending on the field of knowledge required; the tools and machinery used; the materials worked on or with; and the kinds of goods and services produced. Intended to understand the main thrust of the occupation.</p>	<p>Professional body Specialisations Sometimes professional bodies identify different roles in an organisation. This is intended to understand the main thrust of the occupation.</p>
<p>Finance Economics and Accounting</p>	<p>E.g. Auditing / Risk management</p>	<p>Plans, organises, directs, controls and coordinates the financial and accounting activities within an organisation.</p>	<p>Budgeting Manager Account Systems Manager Foreign Exchange Manager Municipal Finance Manager Internal Revenue Controller Chief Accountant Chief Financial Officer (CFO) Revenue Assessment Manager Finance Director Financial Controller Financial Administration Manager Financial Administrator (2021-121101)</p>	<p>Financial management Financial analysis and reporting Risk management Compliance and control management Auditing Investment analysis Private equity or fund management</p>

Figure 6 Columns E – I considered the main thrust of the occupation

Column E requires details from the NQF, here the Learning subfield is captured (see an example of Finance Economics and accounting in Figure 5). Column F requires specification of the learning subfield of each occupation under the Unit Group. In this column, the user can make use of their discretion based on their knowledge of the specialisation associated with the occupation. Column G is taken from the OFO Unit Group descriptor, which gives a broad overview/description of the occupation. Column H is duplicate from the OFO Specialisations. According to the OFO, an occupation can be further divided into several different specialisations, depending on the field of knowledge required, the tools and machinery used, the materials worked on or with, and the kinds of goods and services produced. (Hence the difference between columns G and H). Column I uses information from professional body specialisations,

as professional bodies may identify different roles in an organisation. See an example of Financial management, Risk management, Auditing etc. in Figure 5). This information is mainly duplicate from the source (in this case the professional body).

The third set of deliberations is around the entry requirements of the occupation. In the attached Excel spreadsheet columns, J, K, and M captures the skill level, qualifications, practical and working experience, see Figure 7.

J	K	L	M
<p>OFO skill level In some occupations the OFO selects more than one skill level. The organisation needs to decide on the required OFO skill level (1-4).</p>	<p>NQF level and credits SAQA has 10 levels on which a qualification is placed in the NQF; Credit provides a means of quantifying learning outcomes achievable in notional learning hours at a given NQF level. In some occupations OFO selects more than one NQF Levels; the organisation needs to decide on the required NQF level.</p>	<p>Professional body qualifications requirements This source of information provides specific entry level requirements and the qualification pathway within an occupation. It could include information on formal and practical requirements. This information can be consulted and compared with OFO skill level and NQF education level, respectively.</p>	<p>National Career Advisory Portal qualifications This source of information comes from DHET NCAP portal. It provides specific entry level requirements and the qualification pathway within an occupation. It could include information on formal and practical requirements. This information can be consulted and compared with OFO skill level and NQF education level, respectively.</p>
<p>3 OR 4</p>	<p>8, 9 OR; from 360</p>	<p>Academic requirements BComm with Honours at NQF skill level 8 to 10.</p> <p>Other requirements to practice include; 2 examinations set by the professional body SAICA and 3 - 5 years of articles at an accredited employer. Professional bodies state, employers can decide whether want to adhere to regulations set by these bodies. E.g., in the workplace it may depend on the employer, whether they want an employee such as a chief executive officer/chief finance officer to have CA(SA) registration with the professional body SAICA</p>	<p>1. Bachelor of Financial Planning and Management 2. Postgraduate qualification in Financial Management 3. Bachelor of Accounting Certificate in the Theory of Accounting (CTA) is offered by SAICA-accredited universities.</p> <p>Part I - Qualifying Examination or the Initial Test of Competence (ITC) is the standard setting exam which is written after the completion of the CTA and is an assessment of core competence. To be eligible to write this exam a candidate must hold a CTA that has been accredited by SAICA.</p> <p>Learnership - Chartered Accountant - Financial Management Level 8</p>

Figure 7 Columns J – M considers entry requirements for an occupation

Column J considers the OFO skill level. It is seen that in some occupations the OFO selects more than one skill level (see an example of NQF level in Figure 7). The organisation needs to decide on the required OFO skill level (1-4), and this can be duplicated from the OFO. However, if there is more than one skill level, then professional judgement can be used to decide on the required skill level. Column K requires information from the NQF on the qualification level and credits. SAQA has ten levels on which qualification is placed in the NQF, and one has to be identified on their website. Credits provide a means of quantifying learning outcomes achievable in notional learning hours at a given NQF level, this can also be identified. In some

occupations, OFO selects more than one NQF Level. This means that the organisation/use need to decide on the NQF level they require. Column L looks at the professional body qualifications requirements. This source of information provides more specific entry-level requirements as well as the qualification pathway within an occupation. It could include information on formal and practical requirements. This information can be consulted and compared with OFO skill level and NQF education level, respectively. Column M requires information that comes from the DHET/NCAP portal. It provides specific entry-level requirements and the qualification pathway within an occupation. It could include information on formal and practical requirements. This information can be consulted and compared with OFO skill level and NQF education level, respectively, thus professional judgement will be needed.

The fourth set of deliberations is about tasks performed within an occupation. In the attached Excel spreadsheet columns, N, O, P and Q captures the tasks and duties which are prescribed by the OFO, professional bodies, the public service from the OCS and job adverts, see Figure 8. The information on tasks helps to understand the thrust of the occupation.

In Column N the user will copy from the OFO the tasks performed within the occupation (see examples from Figure 8 such as Establishing and directing, operational and administrative procedures, planning and directing daily operations, consulting with the chief executive and with managers of other departments or sections). The OFO provides a cluster of tasks at the Unit Group level not at occupation and specialisation levels. The organisation is expected to match their job tasks and map them against the OFO Unit Group task cluster. Column O requires tasks stated by professional bodies/associations. Sometimes these professional bodies spell out the main tasks of occupation or specialisation, this can be duplicated from the source.

N	O	P	Q
OFO tasks The OFO provides a cluster of tasks at Unit group level not at occupation and specialisation levels. The organisation is expected to match their job tasks and map them against the OFO unit group task cluster.	Professional body/association tasks Sometimes professional bodies spell out the main tasks of an occupation or specialisation. When this information is available, a comparison can be made with OFO tasks and other sources of information on tasks and duties such as the OCS.	OCS tasks The OCS provides tasks in the form of job outputs. When this information is available, a comparison can be made with OFO tasks and other sources of information on tasks and duties such as professional bodies and the OFO.	Job adverts This source of information provides more specific information than the OFO, OCS, NCAP, and professional bodies. This information can come from different sources such as DPSA; it includes both tasks (duties) qualifications and experience required. It can be used to unpack the scope of work associated with a specific job title within the public sector.
1. Establishing and directing operational and administrative procedures 2. Planning and directing daily operations 3. Consulting with the chief executive and with managers of other departments or sections 4. Assessing the financial situation of the enterprise or organization, preparing budgets and overseeing financial operations 5. Overseeing the selection, training and performance of staff 6. Establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources	Ability to analyse and interpret today's business problems and develop dynamic solutions fit for the future. Chartered accountants core competencies in handling financial and accounting systems, and organisational strategy to provide innovative approaches to development	Complex investigations. * Complex consultation with roleplayers. * Evaluate organisational and post establishment matters. * Identify budgetary needs and make proposals * Program and co-ordinate training activities * Render consultancy assistance to other departments/provincial which need assistance with regard to organisation and workstudy * Conduct horizontal investigations concerning functions that span over more than one	CFO - Job requirements A relevant Bachelor Degree (NQF level 7) qualification as well as a postgraduate qualification (NQF level 8) in Finance or related areas. Professional certification in Finance/Supply Chain environment (CA/CIMA/SCCA/CPA/CIPS) will be an added advantage. Eight (8) - ten (10) years' experience at a senior management level of which at least five (5) years should be in the financial environment. Knowledge and experience of GRAP/GAAP, the Public Finance Management Act

Figure 8 Columns N – Q considers the tasks performed within an occupation

When this information is available, a comparison can be made with OFO tasks and other sources of information on tasks and duties such as the OCS. Column P looks at tasks on the OCS which are provided in the form of job outputs. When this information is available, a comparison can be made with OFO tasks and other sources of information on tasks and duties such as professional bodies and the OFO. Column Q requires the user to access public sector job adverts as this source of information provides more specific public service occupation information on duties than the OFO, OCS, NCAP, and professional bodies. This information can come from different sources such as the DPSA or PSETA and it includes both tasks and duties, qualifications and experience required. This information can be used to unpack the scope of work associated with a specific job title within the public sector. This is where professional judgement will be required by the user.

The fifth set of deliberations is for consideration by the PSETA user on the process and outcome of mapping. In the attached Excel spreadsheet columns, R, S, T and U captures sources of labour market information, the contextual information, any issues which arose during the mapping process and considerations for possible interventions see Figure 9. The different sources of information help us to understand the mapping process and complexities which will influence the consequences of mapping an occupation to qualifications.

Labour market Labour market information includes PSETAS 'hard to fill vacancies', skills gaps, DHET list of top 100 occupations in high demand. This information is critical for skills planning including the most appropriate interventions.	Context For skills planning and interventions more specific contextual information needs to be considered e.g. private vs. public, national or provincial, geographical location, specific department, equity considerations. Describe contextual considerations	Issues / Anomalies Is information across classification systems and other sources inconsistent? Is information not specific enough? Are there qualification or part-qualification gaps? Are there specialisations that exist that are not mentioned by any sources? Is there any specific information missing from the OFO? Are the major groups sufficiently distinct? Analyse issues arising in the mapping process	Possible PSETA interventions +U1
1) On the national list of occupations in high demand. 2) Hard to fill vacancy according to PSETA. Reason: Due to lack of sufficient and/or appropriate experience		what is unclear is who falls in this group as it can have both managers and professionals on OFO skill levels 3 and 4 For the OCS tasks, it is difficult to infer from the Job Outputs dimension (in the COREs) which tasks apply to a specific job because these tasks are presented for occupational categories rather than individual jobs	Advanced Financial Management, Postgraduate Diploma in Management; OHS and Leadership skills; Risk Assessment and Risk Management.

Figure 9 Columns R – U is for considering the mapping process

Column R requires the user to investigate labour market information, which includes details such as the PSETAS 'hard to fill vacancies', skills gaps, DHET list of top 100 occupations in high demand. This information will be critical for the process of skills planning and to locate what the most appropriate interventions could be. Column S involves exploring different contextual considerations for skills planning and interventions. Here more specific contextual information needs to be contemplated e.g. private vs. public, national or provincial, geographical location, specific department needs, equity considerations. This will require a full description of all contextual considerations and professional judgment will be required. Annexure B

contains a sample of mapping examples. Column S has not been completed as the research team did not have the requisite professional judgement, or alternately access to detailed job descriptions, to complete this column. Extensive engagement with stakeholders is recommended to generate the information necessary to complete this column.

Column T is a placeholder for any issues or anomalies which are highlighted from the mapping process. There are several questions that can be considered here such as: Is information across classification systems and other sources consistent/inconsistent? Is the information not specific enough? Is there qualification or part-qualification gaps? Are there specialisations that exist that are not mentioned by any of the sources? Is there any specific information missing from the OFO? Are the major groups sufficiently distinct? This means that the user will have to use professional judgement to analyse specific issues arising in the mapping process. Column U requires the user to consider the possible PSETA interventions which could arise from the mapping process.

What is important to note is that this Framework could help us understand the occupation better, identify issues/anomalies, identify information gaps related to the occupation or qualifications, identify if PSETA needs to request changes to the OFO and identify if PSETA needs to engage with professional bodies and/or other stakeholders.

8. Conclusion

It would seem that Payne was accurate in claiming that to have an employer-led and demand-driven skills system, although prima facie a sound notion, is rife with often unforeseen challenges (2008).

The different sections of the report point to various challenges which arise when attempting to align two distinct but interconnected domains: occupation and qualification. The primary logic of each domain is different. The OFO utilises 'skill level' (higher or lower), 'skill specialisation' (degree of specialisation) and broad occupational similarity to classify occupations; the NQF utilises 'level of learning achievement' as the primary mechanism to broadly classify qualifications. Upon closer

examination, however, it would seem that even separately these classification systems have some limitations. Limitations become even more pronounced if there is an over extension in terms of the use of the frameworks. Therefore, any system needs to be used with in-depth insight into the meaning of occupation.

The limitation of only using tasks or 'skills' to capture the knowledge base of occupation is an area of concern. Contextual factors which often provide quite nuanced information about the work and specialisation associated with the occupation also need to be considered. Secondly, not one classification system should be used in mapping occupations to qualifications. Comparisons between systems yield a broader sense of how our society understands the occupation and its qualification pathway.

The development, and then application, of a framework such as the one developed here, will assist with handling the complexity inherent in generating relevant information on a given occupation and then aligning that occupation with qualification. Accurately understanding the nature of demand, as articulated via employers-based data, is a complex and difficult undertaking. Understanding demand in the medium to long term, as opposed to the immediate and short term, can then add another layer of knowledge useful for skill planning.

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ANNEXURE A: GUIDING TABLE ON FRAMEWORK ON OCCUPATIONS AND QUALIFICATIONS

	Column	Title	Instruction
Identify titles	A	OFO major group; sub major group; minor group, unit group	Utilize (OFO)
	B	OFO Occupation	Utilize (OFO)
	C	Professional title	Utilize (Professional body/association)
	D	OCS job title/s	Utilize (OCS &/ PSETA Mapping Report- Urban Econ)
Thrust of occupation	E	NQF Learning Subfield	Utilize (NQF &/CESM)
	F	The Learning Subfield under the unit groups should be further specified.	By professional judgement
	G	OFO Unit Group descriptor	Utilize (OFO)
	H	OFO Specialisations	Utilize (OFO)
	I	Professional body Specialisations	Utilize (Professional body/association)
Entry requirements	J	OFO Skill Level	Utilize (OFO). If more than 1 skill level, then use professional judgement to decide on the required skill level
	K	NQF level	Utilize (NQF). If more than 1 NQF level against OFO Skill Level, then use professional judgement to decide on the required NQF level
	L	Professional body qualification requirements	Utilize (Professional body/association)
	M	National Career Advisory Portal qualifications	Utilize (NCAP) professional judgement to map job tasks against task cluster of OFO
Tasks	N	OFO Tasks	Utilize (OFO)
	O	Professional body tasks	Utilize (Professional body/association)
	P	OCS tasks	Utilize (OCS)
	Q	Job advert	Utilize (Job advert) Job description/advert should be the starting point
	R	Labour market	Utilize (from specified sources)
	S	Context	Describe contextual considerations
	T	Issue/anomalies	Analyse issues arising in the mapping process

	U	Possible PSETA interventions	
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APPROVAL OF RESEARCH REPORT BY CEO

**Research conducted by the Centre for Researching Education & Labour (REAL),
University of the Witwatersrand on behalf of the Public Service Sector Education and
Training Authority (PSETA)**

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APPROVAL OF RESEARCH REPORT BY CEO	
Recommendation(s)	Approved/ Not Approved
Comments: Report approved	
Signature	
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Date	31-03-2022

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