

MAPPING A RELEVANT EDUCATION AND TRAINING FRAMEWORK FOR THE JEWELLERY SECTOR

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Abstract

This paper acknowledges the ongoing process being used in the Jewellery sector to develop an integrated training and development framework. The framework progresses from ABET Level 1 to doctoral qualifications and shows how the various qualifications could link directly to specific occupations within a sector. In doing so, this paper addresses the boundaries between education, training, industry and government. More importantly, it indicates the inclusive process followed to open the gates to enter the new terrain of relevant education and training for sector specific occupations.

The purpose of this paper is to demonstrate how the South African jewellery sector is aligning education and training within the government's educational policy. The aim of the framework is twofold; firstly, to enable the jewellery sector to become globally competitive through a relevant and integrated education framework. Secondly, to enable a seamless pathway for education & training and employment from the entry level worker to high-level occupations and professions.

The various government policy documents are referred to in acknowledging the various frameworks, their problems and the boundaries causing constraints. The presentations and discussion documents from the various Jewellery Industry Training and Career Path Development workshops are the primary source of information regarding the process followed. The paper ends with the project plan to implement the jewellery sector's Career and Training Pathway Framework. However, the process followed may surprise some people in higher education and the workplace and could provide other sectors with an approach to mapping their own pathways.

Key Words: *Jewellery Sector Development; Industry Sector strategy; Workplace relevance, Higher Education Framework, Occupational Framework; Career and Training Pathway Framework.*

Background

As a design practitioner, the author takes a firm position in the need for relevant design education for the workplace. However, as an educator, he also sees design education as the ideal place to discover new knowledge, introduce new competitive technologies and foster future social responsibility issues that are difficult to accomplish from within the workplace. The dilemma, is that the workplace's view of education is relatively immediate compared to that of education, who takes a much longer term view because it takes long to implement new ideas. Therefore, the workplace needs a long-term strategy to guide education and training in fulfilling its needs. This belief is founded on first-hand experience, where the author managed the turn-around of the Jewellery Design & Manufacture Programme at the University of Johannesburg. This was accomplished by involving industry in the introduction of new design and manufacturing technologies in an attempt to drive competitiveness into the jewellery sector. In order to ensure relevance, the author developed an understanding of the Jewellery sector's needs by becoming involved in two of their strategic task groups. The first restructured the *Jewellery Council of South Africa (JCSA)*, where the author chaired the *Education Working Group*. In the second, he participated in a series of *Jewellery Industry Training and Career Path Development* workshops held jointly by the *JCSA* and the *Mining Qualifications Authority SETA (MQA)*. This resulted in a recommendation to form a permanent *Jewellery Education Forum* to introduce and maintain an education framework linked directly to the sector's occupational framework. This paper therefore bases its discussion on and around these events that are ongoing, but were initiated as far back as 2001.

Introduction

Since 2002, many jewellery industry strategic task groups and workshops discussed the problems between the workplace and education & training. These discussions resulted in a strategic agreement between the MQA and the JCSEA in 2008 to launch the *Jewellery Industry Skills Development Project*. A series of inclusive workshops were held with a wide selection of stakeholders from the workplace and education & training. The author presented an adaptation of the *Higher Education Qualifications Framework (HEQF)* for the jewellery sector to initiate discussions. The resulting proposal from these workshops, called the *Jewellery Industry Training and Career Pathway*, is currently being presented to the broader jewellery industry for comment. The author largely bases this paper on this proposal that is a work in progress. The facilitator of these workshops, Mr. Christoph Vorwerk, provided the critical linkages between the NQF and the Occupational Qualifications Framework (OQF), which in itself is also a draft document from the Department of Labour. Other papers presented by Mr. Vorwerk at various conferences are also referred to when dealing with these linkages.

The process followed by the jewellery sector may surprise some people in education and the workplace because there is a general lack of interaction between education and the workplace. The government has acknowledged this by stating “skills development and training has emerged as one of the key constraints holding back a number of, if not all, sector development. Although the educational and skills development framework are led by the Department of Education and Department of Labour respectively, and therefore the related interventions falls under the skills focus group of the Economic Cluster, there is however, a need for greater and stronger integration between industrial and skills policy and implementation, particularly with respect to sector strategies. This is critical in areas such as ensuring that sector and SETA strategies and implementation are better aligned” (South Africa. Department of Trade and Industry, 2007:40).

Thus, the central argument in this paper claims that to implement an effective framework requires meaningful dialogue between the workplace and education to resolve their different perspectives and objectives through an integrated and relevant framework. The main discussion is based on two key documents that help define the constraints of mapping a relevant qualifications framework for the jewellery sector. The first document is the *Joint Policy Statement by the Ministers of Education and Labour* called “*Enhancing the Efficacy and Efficiency of the National Qualifications Framework*”. This informed many of the changes made in the *Higher Education Qualifications Framework; No 928; Gazetted 5 October 2007* and provides a macro view of the government’s intentions for higher education.

The second document is the cluster study for the South African jewellery industry more commonly known as the *Kaiser Report*. The document was released in 2001 and sponsored by the *National Economic and Labour Council (Nedlac)* in co-operation with the *Fund for Research into Industrial Development, Growth and Equity (FRIDGE)*. This study aimed to assist the jewellery sector to exploit its full market opportunities by providing recommendations based on detailed external research of domestic and export markets, international benchmarking, competitors, acquisition targets, etc. More importantly, it addresses the contribution of education and training as a support service within an industry strategy to become globally competitive. However, without a review of literature on current debates on educational practice and pedagogic theory, any assertions from these documents cannot be grounded. Hence, the brief inclusion of educational theory that describes how students learn through work experience and discusses the relationship of learning between the workplace and education (Guile & Griffiths, 2001:113).

The National Qualifications Framework

According to South Africa Department of Labour (2007:1-11) the Ministers of Education and Labour issued the joint policy statement that was their first formal statement since 1995 on the implementation of the NQF. This concluded a process initiated in 2001, of assessing how the implementation of the NQF could be improved and where it informed the current HEQF. Before reviewing this statement, it is necessary to understand the formation of the NQF to place it in context: Broadly speaking, it was conceived in the democratic labour movement, with support from business and education. It primarily dealt with the legacies of job reservation and retrogressive & discriminatory training practices in the labour force by creating learning and career pathways. Its intention was to embrace a universal system of quality assured standards and qualifications across all education and training to close skills gaps, improve equity and achieve greater market efficiency & productivity. To achieve this, an

integrated national framework for learning achievements was created. To be successful, it has to contribute to the full personal development of each learner and to the social and economic development of the nation at large (South Africa Department of Labour (2007:1-11)).

The previous paragraph encompasses the specific objectives of the NQF, which according to the joint statement, still remain valid. However, after significant stakeholder consultation, the joint statement aims to make the NQF implementation more efficient and responsive to the needs of the nation. Central to this and in support of this paper's argument; is the need to retain the principle of an integrated approach to education and training. This suggests a holistic view of learning, whereby conceptual and applied knowledge each has value and esteem. Accessing bridges between the classroom and the workplace becomes important, so that students can cross over either way to advance their education and careers. However, an integrated approach must go beyond this by affirming all forms of socially useful learning to redress past inequities. Qualifications registered on the NQF should be designed as a whole and should be fit for purpose. Therefore, both unit standards and whole qualifications are equally significant. In addition, learning modules leading to the exit outcomes of a qualification are relevant in both the workplace and in education. Most importantly, the balance of the various forms of learning is determined by the purpose of the qualification. What differs is the context of the assessment to determine the level of achievement of the outcomes in a training programme or occupational competence in the workplace. Hence, the change to ten NQF levels to allow proper scope for the full range of qualification types, especially for intermediate skills at the post-matric and pre-higher education levels (South Africa Department of Labour (2007:1-11)).

The changes required of the NQF, were to the organisational structures to improve the efficiency and efficacy of its implementation. For it to be effective, the implementation needed to be simple, clear, flexible and trustworthy. However, the author suggests that this is the greatest challenge because bridges imply a separation between the workplace and education, which is a real issue because they have different objectives. Education institutions are accountable through their respective quality councils to the South African Qualifications Authority (SAQA), which is responsible to the Minister of Education. SAQA recognises a large number of occupational and professional bodies who are accredited to determine competence with relevant educational institutions. However, representation of the non-statutory professions, such as *jewellery manufacture*, were not included in the original NQF. Therefore, the joint statement suggests the establishment of a Qualification Council for Trades and Occupations (QCTO) will include them. However, the QCTO's are accountable to the Minister of Labour. Regardless, education, labour, professional and occupational bodies should be appropriately represented by expert individuals on the bodies responsible for standards generation and quality assurance. To enable this, educators at different levels and in different areas should be regarded as colleagues rather than competitors (South Africa Department of Labour (2007:1-11)).

In summary, the author reasserts that the real issue is how to implement this NQF through meaningful dialogue between stakeholders with different objectives. What is the point of departure? How is a common goal created and achieved?

Theory of Work Experience in Educational Practice

A review of literature on current debates on educational practice and pedagogic theory attempts to address these questions and see if there is a model that can underpin the framework. Guile and Griffiths (2001:113-131) provide the theoretical context of how students learn through work experience. They also provide a model that indicates the relationship of learning that occurs within and between the workplace and education. As a point of departure, the concept of work experience needs to move beyond a very narrow view of the relationship between the workplace and education. It cannot only be seen as an opportunity for students in formal education to enhance their skills and make closer links with the workplace. This is the result of a 'technical-rational' model of education that separates the teaching of knowledge and skills from their practical application. What is required is a model that links work experience, its underlying knowledge & skill and its context. Importantly, it needs to shift work experience as a context that students learn *about*, to one *through which* they can learn and develop. Many models of work experience have evolved ideas about learning and development. However, they do not use work experience through which students can develop because there is limited connectivity between education and the workplace (Guile and Griffiths, 2001:113-117).

Guile and Griffiths (2001:125-128) present a new connective model of work experience that is based on the idea of a 'reflexive' theory of learning. This involves a greater emphasis on the context and organisation of workplace activities upon student learning. Both education and the workplace must appreciate that work experience provides a range of different ways of learning compared with that of formal education. More specifically, work experience must provide students an opportunity to 'learn to negotiate how they learn' in the workplace because it is critical to their effective workplace performance. To do this, students must be supported to participate in workplace activities and cultures by using appropriate concepts from formal education within the external context of the workplace. However, this is not enough. Students must be encouraged to interrogate the relevance of the workplace activities, resituate the concepts and integrate the new knowledge. Therefore, the idea of work experience needs to change in organisations that provide an environment for learning or participate in learning, as well as in the pedagogic practice of educators. To achieve this, the workplace must be viewed as 'activity systems' within their own divisions of labour, rules and procedures. Thus, the connective model provides a new curriculum framework that takes work in all its forms as the basis for the development of knowledge, skills and identity. This concurs with the holistic view of learning, suggested by the new NQF, whereby conceptual and applied knowledge each has value and esteem. The result will see a lifelong pathway of bridges between education and the workplace so that people can cross over either way to advance their education and careers.

Cluster Study for the Jewellery Sector

The two aims of the cluster study for the SA jewellery industry were to identify opportunities in the industry in terms of foreign exchange & job creation and to develop strategic recommendations for the development of a world-class export capability. The resulting report recommended redesigning all the existing industry structures as its first priority, followed by creating a new support services group that included education. Its final priority was to expand the representation of industry to include a wider participation of stakeholders. (Kaiser Associates, 2001:2-89)

In its overview of training and development initiatives, the report identified both the technikon (now referred to as universities of technology) and apprenticeship systems as inefficient from an industry perspective. As a result, training received limited industry support. However, it acknowledged training as crucial to the industry's ability to expand and improve the quality of the product produced as well as to widen the participation of previously disadvantaged groups. Its first recommendation regarding education was to create a dedicated training structure/discussion forum to bring educators and industry together. This would hopefully ensure a fair distribution of resources and adequate, meaningful training. The second recommendation was to expand the technikon curriculum to include more business skills that would reduce the rate of insolvencies and fill a middle management gap in the sector. The third recommendation was to encourage a greater participation of previously disadvantaged individuals in industry whereby their indigenous talent could be developed into a competitive advantage. The technikons were identified as one of the possible providers to widen access into the sector because of the increase in government assistance to tertiary students. The final recommendation was to fill the skills gap caused by the collapsing apprenticeship system with the learnership system that was meant to be a more flexible competency system for more specialised industry needs (Kaiser Associates, 2001:111-120).

Constraints in implementing the recommendations of the Jewellery Cluster Study

In analysing this section, the author notes a close alignment between the recommendations of the jewellery cluster study and the intentions of the NQF in closing the skills gaps, widening access, improving greater equity and achieving greater market efficiency and productivity. However, Vorwerk (2005:4) identifies the disconnect between the labour market needs and the NQF as the challenge in implementing this strategy. The reasons are that the NQF organising fields and SAQA definition of qualifications do not easily link to the labour market. For instance, occupations such as that of a jeweller can cut across *Field 06: Manufacturing, Engineering and Technology*, *Field 03: Business, Commerce and Management Studies* and *Field 05: Education Training and Development*. Another example often used by industry is what defines a master craftsman such as master goldsmith and where does the qualification exist on the NQF. This is further constrained by the narrow design and definition of quality assurance bodies and processes that suggests but does not require higher education to collaborate with the relevant statutory or non-statutory bodies. Therefore, some learning processes related to the development of occupational or professional skills are not necessarily

deemed relevant in higher education. This creates a notion that occupational qualifications exist below higher education and therefore are not relevant to them. Yet competence requires a varying combination of theory, skills and the ability to apply both in the workplace. An example of this is a qualified goldsmith with a level 4 NQF qualification cannot technically gain access to do a diploma in jewellery design & manufacture because he/she may not have a qualifying matric with exemption. However, he/she can do the job because of workplace experience. This denies the personal development of every learner and the social and economic development of the nation at large. The result is that there is a systemic disconnect between the labour market and the NQF that has to be overcome in developing a unique industry training and development pathway for the jewellery sector (South Africa Department of Education, 2007:1-22).

The jewellery industry training and career pathway

The MQA and JCSA's *Jewellery Industry Skills Development Project* launched in 2008 required a series of workshops attended by a broad section of stakeholders from the workplace and education. Vorwerk (2008:1) identifies the following challenges that were also presented at the beginning of the workshop:

- the worlds of education and industry do not share a common language
- skill needs have not yet been systematically captured nor mapped
- there is no clear progression pathway for jewellery-related occupations
- the nature of skills needs in the jewellery industry may be changing from craft manufacturing to more mechanical manufacturing processes
- quality of learners coming out of parts of the system do not meet industry requirements
- the introduction of the HEQF in 2007 will have an effect on the structure and nature of qualifications in the higher education band
- the new NQF and the revised Skills Development Acts will create a revised space for development

Current situation

The Jewellery Industry Training and Career Path was developed in consultation with a broad section of industry and education stakeholders. Vorwerk (2008:1-2) shows in Figure 1 how they mapped existing qualifications against the 10 NQF levels to determine the vertical progression and horizontal articulation between the various qualifications.

The author expands on Vorwerk's (2008:2) analysis of Figure 1 as there are variances in the focus of each of the three streams. The academic/research stream offers a four-year degree to a doctorate qualification within the realm of fine art. It has a strong emphasis on theory and creative skills in the degree programme. The vocational stream offers a national diploma to a master qualification with a commercial and technological emphasis in the theory and practical skills of the diploma programme. The skills/occupational stream offers qualifications from adult basic education and training (ABET) to legacy trade qualifications with a craft emphasis and minimal formal theory, usually attained by means of skills programmes, learnerships, apprenticeships and recognition of prior learning (RPL). The framework demonstrates that there is minimal possibility of articulation between streams and between ABET Level 4 and unit-standards based jewellery qualifications. There is also no progression beyond NQF Level 4 for the skills/occupational stream. However, there may be an informal articulation based on work experience.

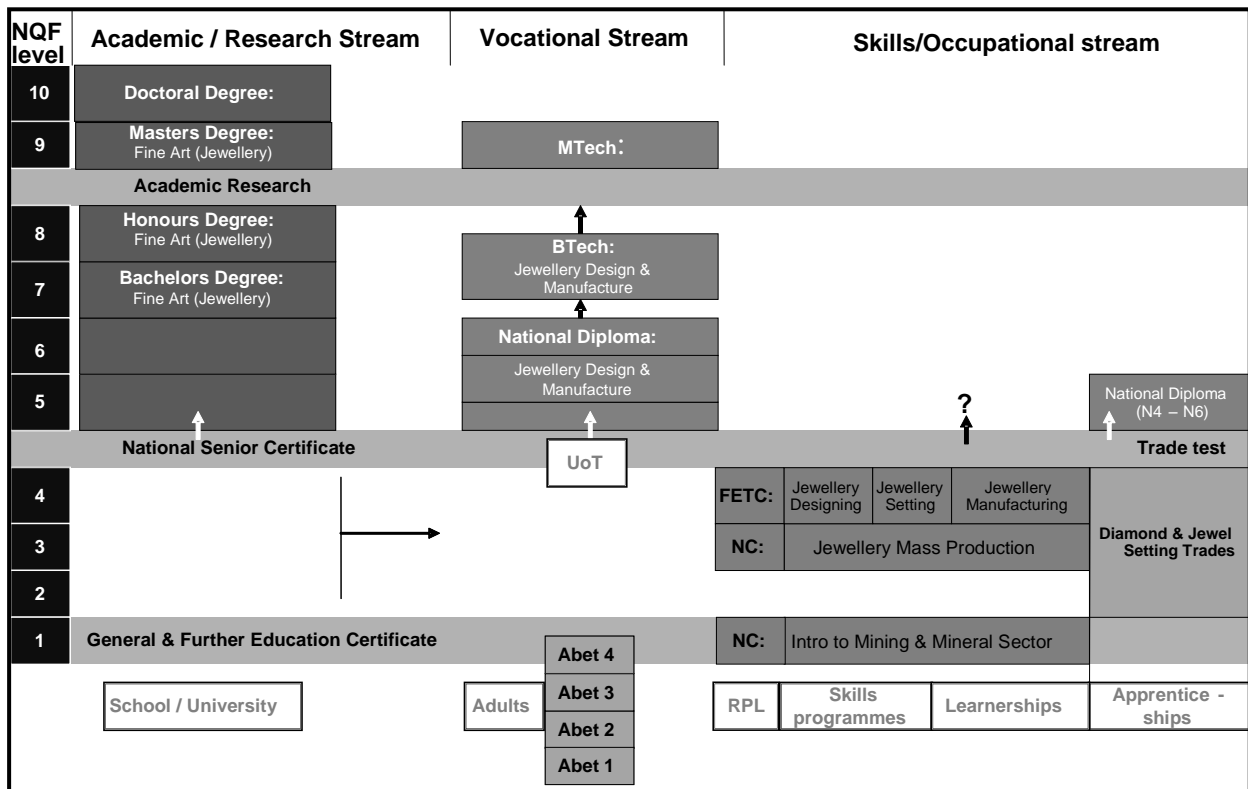


Figure 1: Current Education Framework for the Jewellery Sector. Adapted from Vorwerk (2008:2)

Planned framework

Vorwerk (2008:3) states that an alternative career pathway should create greater flexibility and more options. Therefore, a revised framework (see Figure 2) needs to consider the following new policies & structure and their implications:

- Renamed qualifications and revised criteria for qualifications within the HEQF
- The introduction of a national vocational qualification at Further Education and Training (FET) Colleges, the National Certificate –Vocational (NC)
- Revision of the unit standards-based qualification

The author expands on Vorwerk's (2008:2-5) analysis of Figure 2. The academic/research stream includes an additional three-year bachelor's degree progressing via an honours and masters to a doctorate. The proposed degree is outside the realm of fine art and specifically in design, focussing on designing for mass production using industrial design methodologies.

The vocational stream introduces the NC at FET colleges. This is a whole qualification proposed as an alternative route to the apprenticeship and does not merely replace the previous N-course. It suggests providing fundamental theory and skills that are applicable in the workplace and for access into higher education. However, the HEQF does not stipulate this clearly. Additional research is being conducted to compare the traditional trade qualifications with the unit standards-based ones because there is concern amongst stakeholders that it could create duplication and confusion in the workplace. The vocational stream has also renamed those qualifications currently offered at universities of technology according to the new HEQF criteria. In addition, there is a post-graduate diploma that is useful to articulate across disciplines and to progress to the masters degree from the new and current vocational qualifications.

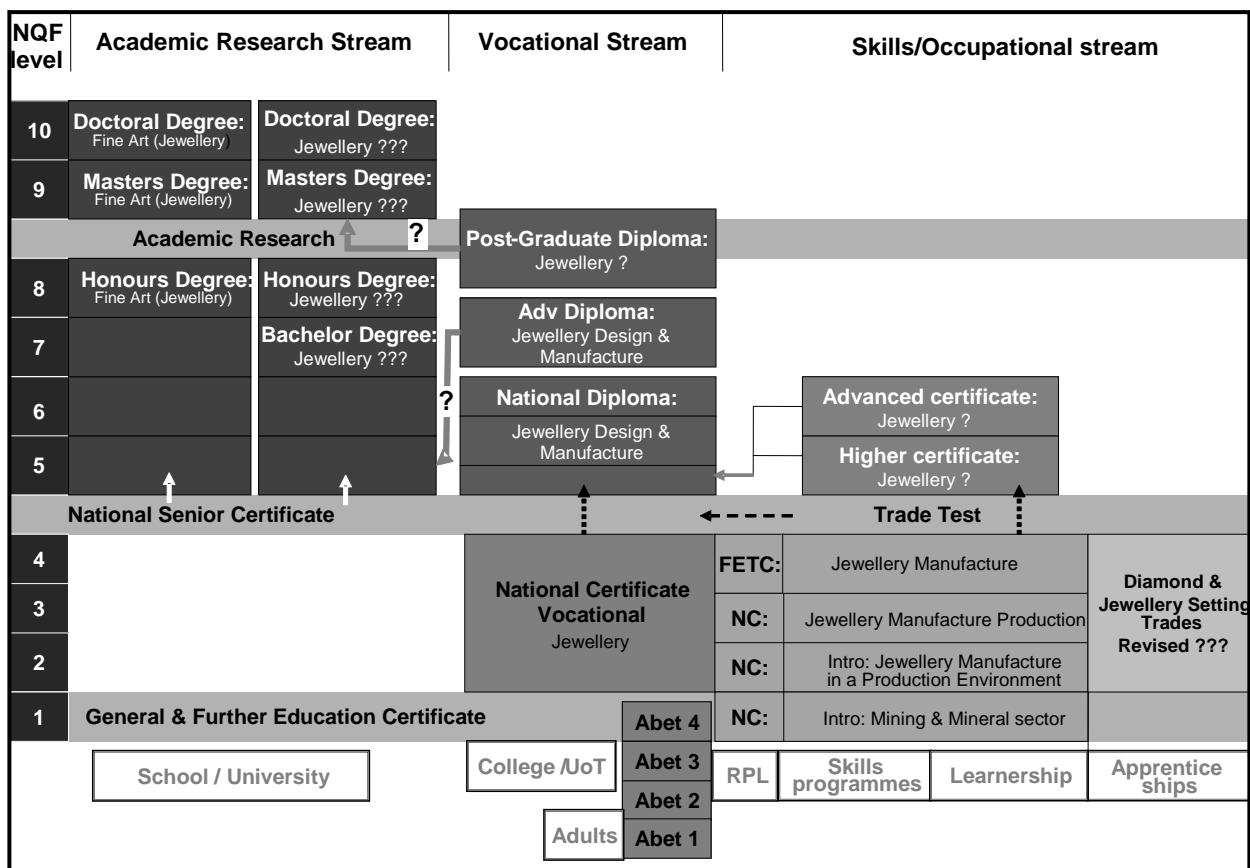


Figure 2: Planned Education Framework for the Jewellery Sector. Adapted from Vorwerk (2008:3)

The skills/occupational stream has redesigned and linked the existing NQF Level 1-4 qualifications to provide a seamless progression. The HEQF also provides new certificate qualifications at NQF levels 5 & 6 that should offer progression from the traditional trade qualifications at NQF level 4. However, the proviso is that the content should come directly from the diploma qualification and be credit bearing to provide access from the skills/occupational stream into the vocational stream (South Africa. Department of Education, 2007:19)

In concluding this section, the planned framework for the jewellery sector is more comprehensive and creates better access and greater progression. There is potential to progress from ABET Level 1 training through multiple routes up to a doctorate. However, many access points at the various NQF levels are not clearly defined in the current policies and will still need clarification by the Departments of Education and Labour. Secondly, without any intended prejudice, people beginning at ABET Level 1 and NQF Level 1 are more likely to stay within the skills/occupational stream because of their skills orientated work experience. Those graduates exiting FET colleges or with moderate matric marks have an option to progress in the vocational higher education stream or into the workplace. They are more likely to remain within the stream once they have gained experience in the workplace. This segment has the greatest potential to create future entrepreneurs that can both grow and improve the equity in the jewellery sector. Graduates with high matric marks have an opportunity to enter both the vocational and academic/research streams. Those that select an academic/research stream will tend to specialise in design and have a better theoretical underpinning with basic practical manufacturing skills. This will enable them to work in more specialised fields in the industry or remain in education/research. Regardless, this stream has the greatest potential to resolve problems and create new opportunities in the jewellery sector through research. Finally, this planned framework seems comprehensive enough for the personal development of every learner and has the appropriate structures to contribute to the social and economic development of the jewellery sector and the nation at large. However, there is still disconnect between the workplace and education because the transitions or 'the bridges' as discussed in the NQF review are not yet simple and clear.

Proposed approach

Vorwerk (2008:5-7) resolves the disconnection between the workplace and education by engaging with the problem from a workplace perspective rather than an educational one. Fortunately, the Department of Labour established a revised process to developing qualifications for jobs and occupations in terms of an Occupational Qualification Framework (OQF) in preparation for its QCTO. The reason being is that the QCTO's draft policy proposals indicate that the MQA and its constituency being the workplace would benefit because of the following:

- a clear and structured process for identifying skill needs in the industry
- the development of relevant curricula and qualifications that will provide clear guidelines to role players in education, training, and the workplace, as well as those for assessors
- alignment with the new emerging policy direction

Vorwerk (2007:11) states that the intention of the OQF is to be flexible and accommodate qualifications that do not belong to other frameworks. Qualifications from other frameworks that include work-integrated learning and approval by professional bodies will not be affected. However, qualifications from other frameworks that include a work experience component must conform to the QCTO's requirements.

The development of occupational qualifications

Vower (2008:6) indicates a revised approach that considers the outcomes of a learning process by defining what the graduate needs to practice competently in the workplace. This approach changes the nature and scope of the existing qualifications. Qualifications may extend over several NQF levels to deal with all the learning stages required. Therefore, the need to construct steps in the form of 120 credit qualifications for each NQF level falls away. Occupational qualifications are developed by:

- analysing the occupational skill sets and identifying the key knowledge, skills and work experience requirements
- developing a curriculum which will provide guidance on:
 - general knowledge and theory subjects
 - practical skills modules
 - work experience modules
- developing qualification assessment specifications to guide the final external assessment, e.g. phase and trade tests
- developing qualifications and unit standards based on the above for registration on the National Learner Record Database

The author notes that the above points are aligned to the new complexity model. However, the design and development process for occupational qualifications, curricula and assessment criteria must be driven by experts from the broader community of practice to ensure they remain relevant and responsive to the changing needs of the industry. This concept is similar to some of the current professional qualifications offered in higher education. Existing qualifications, curricula and training programmes can be analysed to decide on what components are exempted. To do this a common model (see Figure 3) is required to structure the curriculum so that transitions between education and the workplace can be dealt with coherently.

Knowledge & theory	Practical skills	Work experience
"Full" occupational qualifications		
Vocational & occupationally directed qualifications		Work experience qualifications
General 'academic' qualification	Stage 2 qualifications	

Figure 3: Qualification Competence Model - Adapted from Vorwerk (2008:7)

Vorwerk (2007:11) states that "full" occupational qualifications refer to occupations where all the learning components are offered by the workplace and providers. These would generally be at the

lower levels of the NQF or could be in highly specialised occupations with limited numbers that may not make them economically viable for mainstream education. Vocational and occupationally directed qualifications are generally those where the theory and practical components make it possible for graduates to enter the market. They are generally offered by FET colleges and universities of technology. However, an additional work experience component is required to qualify and practice in the occupation. The general 'academic' qualifications are often professionally inclined, and require a Bachelor of Science, Commerce or Engineering degree. The stage 2 qualifications comprise of specialised modules, work experience (articles, internships, etc.) and a final assessment in order to be recognised as qualified by the relevant professional body.

Mapping skill levels on the National Career Path Framework (NCPF)

Vorwerk's (2005:21) analysis of the NCPF indicates two broad career paths: the first shows increasing levels of knowledge and skill underpinning expert performance in a specialised field of work. The second relates to a broadening span of control or management within an organisation, community, etc. Figure 4 integrates these two career paths within the NQF levels:

	Descriptor	Specialisation Career Path	Management Career Path
10	High-level occupations and professions	Research professional	Strategic management
9		Professional	Senior management
8		Para-professional	
7	Mid-level occupations	Support professional, technologist, master artisan	Middle management
6		Technician, specialised sales, master artisan	Supervisory management
5	Skilled, administrative and service level occupations and trades	Trades, technical, clerical, service, assistants, general sales	
4			
3			
2	Support level occupations		
1	Entry level worker, elementary occupations		

Figure 4: National Career Paths - Adapted from Vorwerk (2005:21)

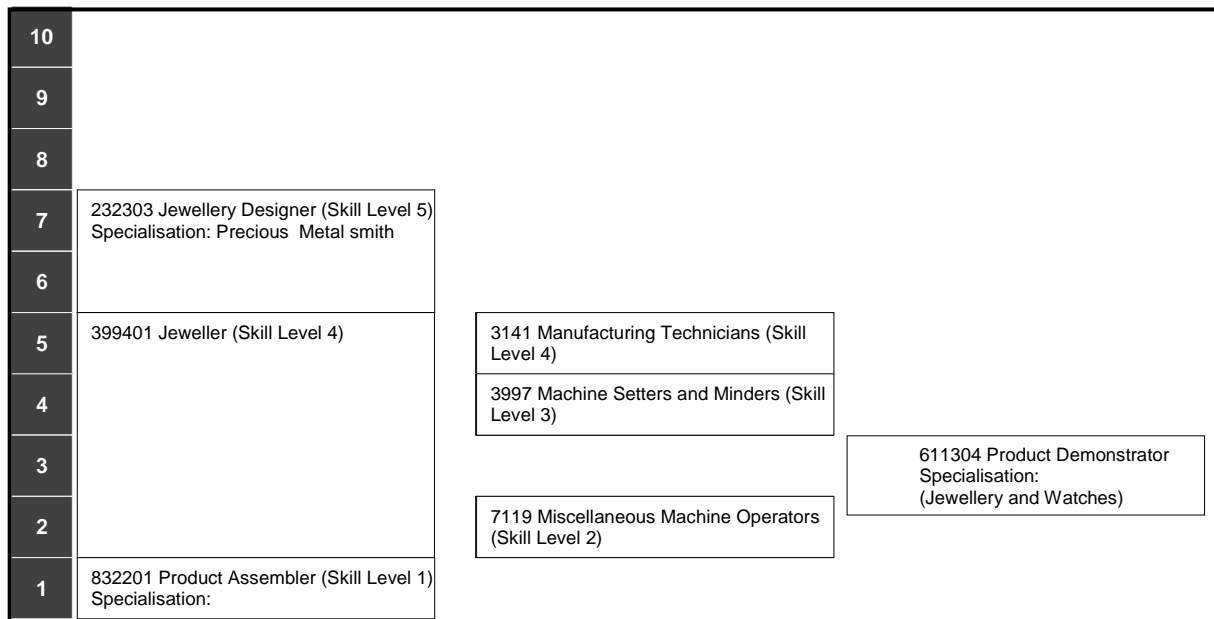


Figure 5: Proposed Qualification Framework for the Jewellery Sector - Adapted from Vorwerk (2008:8)

Figure 5 shows the some current and proposed jewellery occupational qualifications mapped against the NQF levels. This is incomplete; however, the ongoing process will determine what occupational qualifications are required.

Proposed NQF implementation process

Vorwerk (2008:10) describes how to do a phased implementation of this Jewellery Training and Career Pathway. The draft QCTO policies require a registered facilitator to engage with the practice based experts throughout the process. A standards generation board or quality assurance group is established as a reference group. Finally, the proposed occupational qualification is distributed to the broader group of stakeholders for feedback.

Phase:	Activity
Research Phase 1:	Mapping education pathways
Research Phase 2:	Compiling an occupational pathway
Development Phase 1:	Develop occupational profiles and define skills sets
Development Phase 2:	Construct learning pathways and exit level outcomes for qualifications
Development Phase 3:	Define the curriculum by unpacking knowledge, practical skills, work experience and critical cross-field outcomes required to be competent
Development Phase 4:	Develop assessment criteria against the outcomes
Development Phase 5:	Convert into qualifications and unit standards for registration purposes

Figure 6: NQF Implementation Process for the Jewellery Sector - Adapted from Vorwerk (2008:9)

Conclusion

This paper addressed the problems of mapping a relevant educational and training framework for the jewellery sector. The new NQF has always stipulated the need to retain an integrated approach to education and training where formal knowledge and work experience each has value and esteem. Guile and Griffiths (2001:113-117) proposed a new model of education to link work experience with its underlying knowledge & skill and its context. However, the context of work experience must shift from students learning 'about' to one 'through which' students can learn and develop. The model proposes that the workplace is viewed as activity systems, with divisions of labour, rules and procedures. Students must be supported to participate in workplace activities and cultures by using appropriate

concepts from formal knowledge learned. Furthermore, they must interrogate the relevance of these workplace activities, resituate the concepts and integrate the new knowledge. Work experience must provide students an opportunity to “learn to negotiate how they learn” in the workplace because it is critical to their performance. Thus, the connective model addresses many of the objectives of the new NQF.

The aim of the joint statement by the Ministers of Education & Labour was to make the NQF implementation more efficient and responsive to the needs of the nation, by making it simple, clear, flexible and trustworthy. The process used by the jewellery sector in the *Jewellery Industry Skills Development Project* tested this aim and found that it is efficient and responsive to the sector’s needs as far as it was simple and clear to map all the qualifications during the workshops. All stakeholders could understand and engage with the NQF. However, the HEQF is not flexible enough to create an integrated framework because there are too many barriers for vertical progression and horizontal articulation. This is especially so from the FET to HE.

In addition, the NQF was more responsive to the needs of education rather than the integration of education and the workplace. Integration relied extensively on the new draft OQF because it addresses what the graduate needs to practice competently in the workplace. To achieve this it uses a Qualification Competence Model that defines the knowledge & theory, practical skills and work experience required to be competent in the workplace. This determines the most suitable level for the qualification on the NQF and in which stream it most appropriate, i.e. academic, vocational or occupational. Similarly, occupational qualifications can be mapped to a National Career Path that is determined by the level of specialisation or management required at any particular level. The approach of the OQF supports the connectivity theory model because it determines the context for work experience using workplace activities that can support formal learning and allow the student to interrogate the relevance thereof. It is premature to declare this mapping process followed by the jewellery sector as a success because it is work in progress. However, the process required meaningful dialogue between the workplace and education to resolve their different perspectives and objectives in creating an integrated framework. What is evident is that the workplace must be proactive regarding its education and training needs because they need to determine what and how many graduates they require and with what mix of knowledge, skills and experience. Therefore, the workplace must collaborate with education and training rather than seeing them as service providers. However, the main concern of the author is if education, which has a longer-term view than the workplace, can respond to the continually changing knowledge and technology requirements expected by the workplace. Similarly, does the workplace has the capacity to determine its education and training requirements with a longer-term view? The Departments of Education and Labour need to consider the barriers and adapt the NQF policy to create access through the levels. Only then can bridges between the workplace and education be accessed by all people to cross over either way on a path of life long learning.

Bibliography

Guile, D & Griffiths, T. 2001. Learning Through Work Experience. *Journal of Education & Work*, 14(1):113-131, 2001

Kaiser Associates. 2001. *Jewellery Industry Cluster Study - Final Strategic Recommendations*. Johannesburg: Jewellery Council of South Africa

South Africa. Department of Education. 2007. *The Higher Education Qualifications Framework - Higher Education Act*: Pretoria: Department of Education

South Africa. Department of Labour. 2007. *Enhancing the Efficacy and Efficiency of the National Qualifications Framework - Joint Policy Statement by the Ministers of Education and Labour*. Pretoria: Department of Labour.

South Africa. Department of Trade and Industry. 2007. *Industrial Policy Action Plan*. Pretoria: Department of Labour.

Vorwerk, C. 2005. Occupational Qualifications on the NQF: Communities of Mistrust?. *Proceedings of the Q-Africa 2005 Conference*, November 2005.

Vorwerk, C. 2007. Occupational Qualifications Framework – Proposals for a Revised Approach to the Development and Management of Occupational Qualifications on the NQF. *Proceedings of the Q-Africa 2007 Conference*, November 2007.

Vorwerk, C. 2008. *Jewellery Industry Training and Career Pathway*. Johannesburg: Mining Qualifications Authority:

Short Biography

Andro Nizetich previously managed the Department of Jewellery & Ceramic Design at the University of Johannesburg and currently lecturers in the Department of Industrial Design. His qualifications include a BTech: Industrial Design and a Masters: Business Administration. He has substantial experience across design disciplines and more recently in design education. Niz, as he is preferably known, has a strong strategic ability and easily traverses the boundaries between disciplines to provide innovative, yet pragmatic solutions in any of his endeavours.

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