LMIP THEME 6: UNDERSTANDING CHANGING ARTISANAL OCCUPATIONAL MILIEUS AND IDENTITIES

STUDYING THE SHIFTING BOUNDARIES OF ARTISANAL WORK AND OCCUPATIONS: RESEARCH GUIDE

LABOUR MARKET INTELLIGENCE PARTNERSHIP (LMIP)

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SECTION 1: INTRODUCTION

BACKGROUND: WHY THE NEED FOR A RESEARCH GUIDE?

The Human Resource Development Strategy of South Africa (HRDSA) and the erstwhile Joint Initiative on Priority Skills Acquisition (JIPSA) identified access to reliable information as an obstacle to the supply of relevant skills for growing the economy (DHET, 2010). In recognition of this gap a dedicated outcome and delivery agreement was set up towards the establishment of a credible institutional mechanism for skills planning in the country. In 2012, the Department of Higher Education and Training (DHET) commissioned the Human Sciences Research Council (HSRC) to lead a national research consortium, the Labour Market Intelligence Partnership (LMIP), to support it by conducting research that would form the evidence base towards reaching this outcome.

The programme of research spans a range of issues that essentially aims, to better understand the labour market, the nature of skilling available, the relation between education and the labour market as well as frameworks that could be employed to better understand these. The traditional structure of research consortium relationships would require the conducting of research to extend the knowledge base in skills and labour market planning, however, an equally important and particularly critical component of the LMIP was to capacitate a broader range of skills stakeholders to conduct analysis and interpret labour market information.

This research guide is a first step towards this institutionalisation process, a product of the intense engagement and debate that formed a critical part of the structuring of the research process. As the template draws on the findings, methodology and design for the investigation into changes to the nature of artisanal work in three trades and industry sectors in South Africa, it is intended to inform the practice of Sectoral Education and Training Authority (SETA)/National Artisan Moderation Body (NAMB) skills planning and strategy development particularly with relation to intermediate and artisanal skills.

The research guide provides a conceptual frame and research instruments to assist skills and strategic planners in their task from a specific research method and design perspective. Specifically, the guide provides practical guidelines and tools to collect data to understand artisanal work change, but the approach differs from the supply and demand estimation approaches conventionally used to assess the change in demand for skills that arise from work change. We encourage a more nuanced assessment of the sociological and contextual factors informing the nature of demand and supply in specified industry sectors. The reasoning for which is explained briefly, before a consideration of the types of insights that is possible through the use of such an approach.

A DESIGN AND METHODOLOGY THAT AIMS TO UNDERSTAND SKILLS SUPPLY AND DEMAND IN A CHANGING CONTEXT

The theme of work from which this research guide derives, focuses on understanding issues of skills supply and demand, particularly in relation to artisanal work. It argues that a more sociologically informed approach to understanding changes to the nature of work is required in order for us to better understand demand and supply. There are three projects under this theme, all investigating change to the nature of artisanal training and employment; 1) from a historical political economy perspective, 2) in terms of occupational scopes of

practice and identities, and 3) the relation between intermediate level knowledge and work. This guide is based on the methodology and approach used for the second dimension.

The problem of scarcity of artisanal and intermediate level skills in the country is well highlighted, but we need to consider a wider range of forces when deciding how to respond to the challenges for the production and employment of artisans. Work has, is and will continue to change, but the increasing pace at which this is happening has led many to assert that we need to regularly assess the implications for understanding and responding to the challenges of contemporary labour markets (Burke & Ng, 2006; Burns, 2007). In addition, some argue that work is not only changing more rapidly, but with increasing complexity (Heerwagen et al, 2010). Some of the key changes to work include increasing globalisation, the impact of technology (automation and mechanisation), the nature of employment (from full-time to shorter-term, contract based jobs), the bigger role played by organisations (Muzio et al, 2011), less hierarchical and standardised forms of work organisation, and the identity and values of workers (Schmid, 1995; Wildschut et al, 2015).

The point is simple - there are changes to work that can result in change to the occupational scope of practice and its associated knowledge and skills (Castiglioni, 2015; Bailey, 1990) - the traditional boundaries of the occupational group as it were. It is thus imperative to engage critically with how work change translates to change for different levels of work, as this holds implications for demand and supply of skills. To capture and analyse such change in artisanal work, the project adopted the lens and concept of 'boundaries' between occupational groups.

SECTION 2: A SET OF KEY CONCEPTS

It is important to clarify how the concept of occupational boundaries was conceptualised, so that one can understand how the methodology and design of the research allows us to be able to say something useful about work change in relation to a particular occupational group, in this case artisans. The project attempted to give insight into the changing nature of artisanal work with the main research question being: *Has the work of artisans changed, and if so, how?*

2.1 CONCEPTUALISING AN OCCUPATIONAL BOUNDARY

The concept of boundaries is well established and has been extensively applied to investigate various forms of sociological and institutional change (Lamont & Molnar, 2002). As this project focused on the ways in which boundaries between occupations are manifested in the work context, the conceptual frame was informed by studies on professions and work (Abott 1988, 1995; Freidson (1989, 2001) as well as science, disciplines and knowledge (Gieryn, 1983; 1999; Star & Griesemer, 1989).

As the right to supply certain collections of skills, services and knowledge to society holds monetary and status rewards, it is not surprising that there will be competition over these domains. Occupations constantly try and expand, either vertically or horizontally, their claims towards rights to offer a collection of skills, knowledge and services (also referred to as jurisdictional claims), in the labour market. Occupational boundaries are thus critical in establishing control over knowledge and/or practice domains in a labour market. Established professions such as medicine, law and engineering are examples of occupations that have been successful in

establishing and defending their occupational jurisdictions. Fournier (2000) indicates two processes crucial towards establishing such control

- the constitution of an independent and self-contained field of knowledge as the basis upon which to claim/build authority and exclusivity, and
- the labour of division[1] which goes into erecting and maintaining boundaries between the professions and various other groups (other occupational groups, clients and/lay persons, and the market).

As professions are occupations that have been successful over an extended period of time in claiming exclusive rights to offer certain services and perform certain tasks for society, the contestation of occupational domains is an issue explored extensively in the sociology of professions and work literature. Authors such as Abott (1988; 1995) and Freidson (1989; 2001) are notable in this regard, as well as theorists such as Star & Griesemer (1989) and Gieryn (1983)[2]. But with professional boundaries increasingly coming under pressure due to extensive changes in the world of work today, interest has renewed around the issue of occupational jurisdiction.

This discussion still tends to predominate in the area of healthcare (Miller, 2014; Kroezen et al, 2013; Motulsky et al, 2011; Wakefield et al, 2010; Martin et al, 2009; Barret et al, 2007) and Social Work (Heite, 2012; Welbourne, 2009), but increasingly a wider array of fields and occupations are being considered; for example journalism (Lewis, 2012) and academia (McMillan, 2011). Issues surrounding changes to knowledge, competencies and skills have thus received attention in the more 'traditional' professions, but artisanal occupations have seldom been the focus of such investigation. Vallas' (2001) work on engineers and skilled manual workers is one of such few. This highlights a clear gap in the literature that studies such as this can start to address.

Based on this literature, a very basic premise is constructed, that an occupational boundary can be understood as a distinction between different types of occupations. It is a distinction that consists of observable elements of a domain of work as well as the conceptual distinctions informing the association of a domain of work with a specific occupational group. Lewis (2012, 7) makes a similar assertion that jurisdiction is about 'displaying what a profession or occupation knows (its system of abstract knowledge) and connecting that to what the profession or occupation does (its labour practices)'. We conceptualise that occupational boundaries change in relation to shifts in these two aspects. To represent the system of abstract knowledge we select the concepts of skills and knowledge, to represent the labour practices, we select the concepts of tools, materials and organisation of work. Together, these elements are selected as delineating the boundary between occupations[3].

The diagram illustrates the conceptualised occupational domains in relation to another, as well as the elements comprising such domains. The central idea underpinning the illustration is that change to occupational domains occurs in a relational manner, which is why the boundary between occupations overlaps.

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[1] The idea referred to by Weber (1987) as incommensurability, that professions are not the technical outcomes of the intellectual division of labour, but are constituted and maintained through processes of isolation and boundary construction (Fournier, 2000: 73).

[2] While Thomas Gieryn (1983) used the term boundary work to study how science is and has been demarcated from non-science, the potential of boundary objects to cross disciplinary boundaries have been emphasised by Star & Griesemer (1989).

[3] The guide should in the future also consider the product as a potential factor impacting on shifting occupational identities.
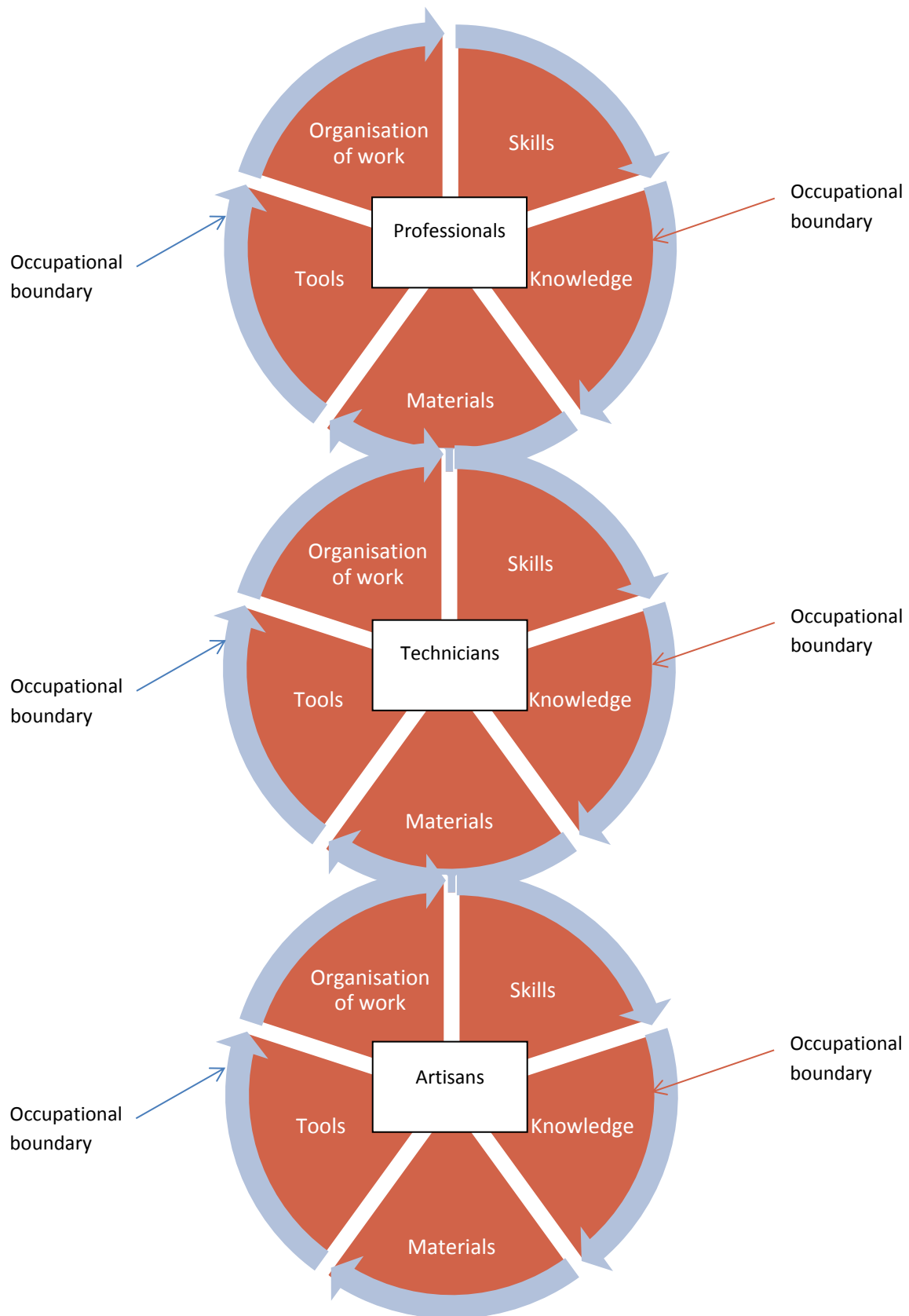
Figure 1: Working conceptual frame to investigate change in the boundaries between occupations

Some of these terms are contested in the literature, requiring clarification on how these are used in this study. A purely practical distinction is adopted in using the terms **knowledge** and **skills** respectively, although we acknowledge that there is a relation between the two that might make distinguishing between them inappropriate in some instances. We wanted to differentiate between changes to expectations of what artisans should be able to do (skill) and what they must know (knowledge)[4]. In using these two concepts we intend to highlight the symbolic relevance and discursive work that is critical in establishing disciplines and knowledge domains.

However we also wanted to capture actual work change and here literature on work as a labour process becomes useful. This literature suggests that occupational boundary rules are established by the relation between **materials, tools** and **organisation of work**. As illustrated in Gamble (2015:8), "work can be described as a labour process that comes about through the relation between the division of labour (or the way work is organised), the tools or technology used and the materials used… this three-way relation was the traditional way of separating one trade from another.. [and] the value of understanding work in this manner remains undisputed". Others would add the final product as another important element distinguishing the scope of work of different occupations. But as the occupational groups under consideration for this study worked towards the production of the same "product", we did not adopt this further distinction[5].

We argue that using occupational boundaries in the way it is conceptualised here, incorporating individuals' understanding of the skills and knowledge associated with their work, can offer additional insight into work change and its implications. Individual and group perceptions and attitudes around work are an often neglected area of investigation, but they clearly have a bearing on the labour market (Mncwango et al, 2015) and any political and economic benefits (Burger et al, 2015). In this way an approach investigating boundaries can allow two additional dimensions of understanding: a more nuanced level of interrogation into skills supply and demand claims, as well as highlighting other socio-cultural forces at play that can impact on the success of interventions aimed at facilitating a better link between education and the labour market.

2.2 A SUMMARY OF HIGH LEVEL FINDINGS TO ILLUSTRATE POSSIBLE INSIGHTS FROM USING THIS APPROACH

The investigation in line with the key concepts explained before resulted in the following central findings on artisanal work change[6]:

1. <u>Organisation of work:</u> Work continues to be organised hierarchically with strict protocols governing interaction and levels of responsibility between occupational groups.
2. <u>Materials:</u> The materials associated with artisanal work remain constant and a key contributor to the occupational identity.
3. <u>Tools:</u> The tools associated with artisanal work are changing and those falling in the jurisdiction of a particular occupational group are currently being contested.
4. <u>Knowledge:</u> There are real and perceived changes to the knowledge required for artisanal work
5. <u>Skills:</u> There are real and perceived changes to the skills required for artisanal work.

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[4] The debate on differentiating between knowing that and knowing how is clearly outside of the scope of this guide. Theorists such as Ryle (1949) and Russell (1912) are notable in this regard.
[5] A broader list of definitions of concepts used in this study is attached as a table at the end of the document.
[6] For more specific findings and the possible nuances within a particular trade, refer to the synthesis report.

This empirical base underpins the overarching and concluding messages towards improving labour market analysis that would inform artisanal skills planning policy and process:

Message one: It is important to understand the changing nature of work	Message two: It is important to recognise work as more than just a labour process	Message three: It is important to understand work change as relational
• Work change has wide-ranging implications for the nature and location of demand and supply of particular skills. • The relation between work change and demand for skills is complex, with sometimes unpredictable outcomes for demand	• The history and sociological discourse of a sector and occupation are pervasive and can impact on the success of labour market or skills development interventions • The identities and attitudes individuals have in relation to their work, are mediating factors with the potential to impact critically on the succces of labour market interventions	• Change to occupational domains occur relationally and this should also be taken into account when assessing the supply and demand of skills

Section 3: Study design and tools

The project undertook research on selected artisanal occupations in three industry sectors: Mechatronics technicians (OFO code: 671203) in the automotive sector, Electricians (OFO code: 671101) in the mining sector, and Millwrights (OFO code: 671202) in the metals sector. It was designed as a set of case studies of key occupational groups in a focus field of practice and industry sector, combining primary and secondary research. We selected this approach, as case studies make it possible to 'analyse at a concrete level the interactions among changing markets, changing technology, changing labour supplies, changing skill requirements, and changing educational processes' (Bailey, 1990: 3). This involved the following elements; occupation specific literature reviews, organisational document reviews, labour market demand and supply analysis, and individual interviews. Informed by the data collected from all these avenues, each case study analysed the interview data thematically to interrogate change to the occupational boundaries between artisans, technicians and professionals using the five elements conceptualised as comprising an occupational domain of work: work organisation, materials, tools, skills and knowledge expected to be held by an individual doing such work.

In this section we set out the steps undertaken in our study which can be used as a template for future studies on work and occupational change and its impact on the nature of demand and supply of skills. As summarised above, the case study design uses a combination of:

➢ desktop and data-based research, and
➢ fieldwork research

3.1 Step 1 - Case selection

The first step in conducting a similar study on occupational change is to identify the cases to be studied. We consulted the Organising Framework of Occupations (OFO) for a list of artisanal related trades and occupations. The framework is categorised into five groups detailing occupation specific codes (see Figure 1).

Artisanal related occupations are found in Major Group 6: *Skilled agricultural, forestry, fisheries, craft and related trades workers*. Occupational codes 671101 (Electricians in mining sector), 671202 (Millwrights in metals sector) and 671203 (Mechatronics technician in automotive sector) was selected as focus occupational groups for the study.
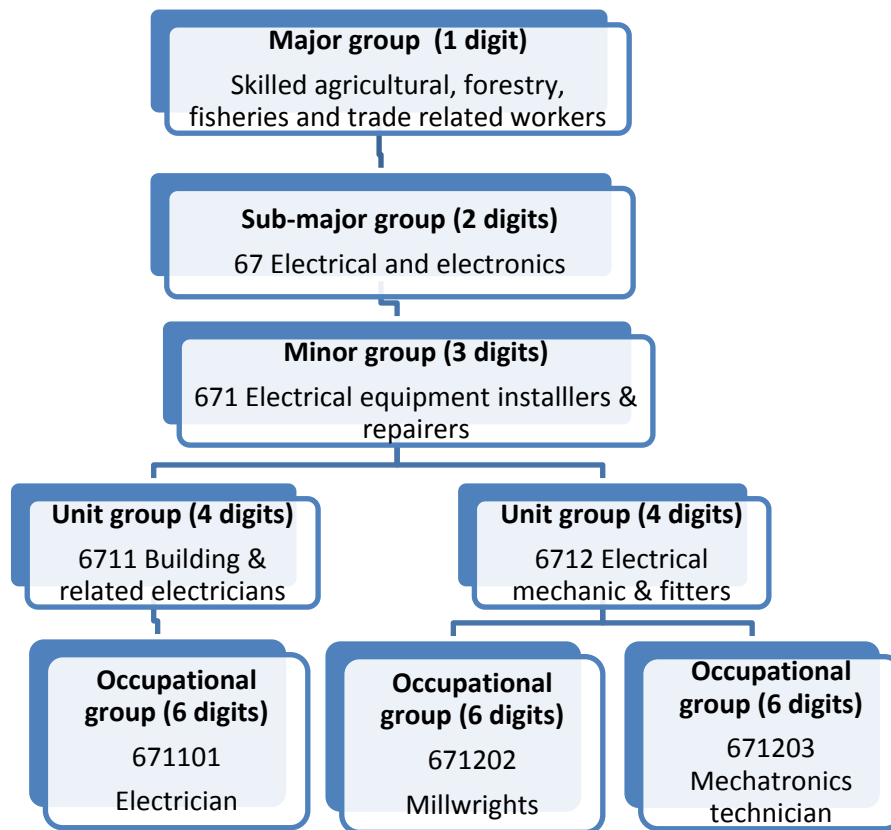
Figure 2: Organising Framework for Occupations (OFO) Selection

3.2 STEP 2 - DESKTOP RESEARCH

In step 2, desktop research is conducted to inform contextual overviews. This involves occupation specific literature reviews, organisational document reviews, and skills demand and supply analysis in relation to the specific trade and sector. This informs the primary research by giving specific information on the sector and sub-sector within which the trade will be studied.

3.2.1 ESTABLISHING SKILLS DEMAND

The demand side data for this study consisted of occupational data by sector over the period 2008 – 2013 on the labour market, extracted from the October Household Survey (OHS), the Labour Force Survey (LFS) and the Quarterly Labour Force Survey (QLFS). Sectoral demarcations were used to extract occupational and sectoral demand data for each case. The occupational code for each focus artisanal occupation was used to extract

occupational data within the focus sector. However, we report mainly on occupational level data at a national level, as LFS data is known to be less reliable at highly disaggregated levels.

3.2.2 ESTABLISHING SKILLS SUPPLY

The supply side data provides an account of the skills supply coming from education and training institutions. Three major sources were used; data from Technical Vocation Education and Training (TVET), Higher Education Management Information System (HEMIS) and trade test data from NAMB (this data was previously housed under the institution called INDLELA).

➢ TVET data provides an account of the number of people doing *subjects* at TVET colleges towards obtaining a particular qualification.
➢ HEMIS collects a wide range of student data at higher education institutions. It provides comprehensive records on student headcount enrolments, graduates, fulltime equivalent enrolments and staff details.
➢ INDLELA data provides an indication of the size of the artisanal learner population in the country.

The contextual overviews are used to provide as much information and context into the labour market and skilling system relevant to a specific trade.

3.3 STEP 3: FIELDWORK RESEARCH

In step 3 fieldwork research using semi-structured individual interviews, focus group interviews and observations was planned. Although focus group interviews and observations unfortunately could not be accommodated within the financial and time constraints of this particular project, this would be the ideal combination of research tools to study most comprehensively the nature of change.

3.3.1 INDIVIDUAL SEMI-STRUCTURED INTERVIEWS

Contact details of potential participating companies were secured through desktop research and letters of invitation were sent to firms requesting their participation in the study. Once an appropriate sample was secured interviews could be conducted. We selected artisans, technicians, engineers and human resource (HR) professionals as key participants to be interviewed. The contextual interviews also informed the design of the research instruments and the types of questions and data to collect. Interviews are supplemented with organisational documents, policies and organograms.

Semi-structured interview schedules were designed to collect a broad range of data related to occupational milieus and labour markets, boundary work, boundary objects and identity, although participants were allowed to raise additional issues (See Appendix A for the schedules). The interviews were conducted in boardrooms, training centres and workshops on company premises, designed to last between thirty to sixty

minutes. All participants received an information and consent form that detailed the background for the study as well as ethical considerations. This was sent out to participants before-hand and at the start of the interviews any questions of clarity around the project and research process was addressed. For accuracy purposes, interviews were tape recorded and transcribed verbatim.

3.3.2 FOCUS GROUP INTERVIEWS

Focus group interviews are conducted especially in instances where one is interested in attaining whether a group identity can be identified and when one is interested in the impact of this aspect on work change. Some interviewees also feel more comfortable talking in a group context, but on the other hand some individuals are more afraid to raise concerns. The researcher has to assess the merits of each case and firm context, which of the research tools would work best and cause the least amount of discomfort.

3.3.3 OBSERVATIONS

Observation schedules are used to facilitate the noting of dynamic processes in action in relation to boundaries. At the end of each research day researchers capture their general assessment of the contexts within which boundary work (crossing, maintenance) might occur, in relation to which aspects (knowledge, skills, professionalism, competencies), most used objects, and aspects they assess to be important in the participant's portrayal of their identities. The dimensions and indicators are just suggestions based on research in the field and experience in similar projects, but are open to other dimensions, or indicators.

4. THEMATIC ANALYSIS

The computer programme, NVivo (version 11) was used to code the qualitative data. Essentially there were three dimensions of coding. The coding per case was done by at least two researchers to enhance reliability. Firstly, the descriptive data were classified, linking demographic data to each transcript, so that when quotes were coded at a particular node/theme, this information was included. This made it possible for example, to search by race and case, whether there were identifiable differences in how occupational boundaries were contested. Secondly, we coded for instances where the elements constituting an occupational domain were mentioned. At this level we only coded for whether a particular piece of narrative indicated change in the field of practice. Here for example, mentioning of different technologies used in their work would count as indicative of change to the tools used. Lastly, we coded for whether the quote indicated perceived change to the particular element in terms of the work of an artisan, technician or professional.

SECTION 4: RESEARCH INSTRUMENTS

The research instruments for data collection are divided into three categories.

a) Instrument 1: Individual semi-structured interviews
b) Instrument 2: Focus group interviews
c) Instrument 3: Observation schedules

APPENDIX A: RESEARCH INSTRUMENTS

INSTRUMENT 1A: SEMI-STRUCTURED INTERVIEW – ARTISAN

SECTION A: PROFILE OF RESPONDENT

Gender		Race				Age			Sector	Trade	Region	Size of company			
M	F	B	C	W	Other	18-29	30-45	46-65				XS	S	M	L

SECTION B: INTRODUCTORY QUESTIONS

Please provide a brief resume of your career? (Where do you come from? Where did you study? What kind of training did you complete – learnership/apprenticeship? How did you come to be in your present job?)

SECTION C: OCCUPATIONAL MILIEU AND LABOUR MARKET

Since you have completed your training and given your experience in the labour market (note date and extent of experience), what do you consider to be the major changes to work in your occupation?

Would you say these changes have impacted on the following aspects in relation to you're the labour market requirements in your sector in terms of:

skills (eg. problem-solving, language and literacy, mathematical)

knowledge (eg. discipline specific or not)

work organisation (eg. teams, central or decentralised management)

Do you feel that these changes are being taken up in artisanal education and training? How? For example, how would you rate the extent of alignment between the curriculum at the institution where you trained and the work you do now?

None	Some	Substantial

Do you feel that the changes to your work/sector have had an impact on how your job is viewed or the contribution you as an artisan can make?

SECTION D: BOUNDARY OBJECTS AND BOUNDARY WORK

What work do you do on a daily basis? Please discuss this with reference to the following:

The range or types of tasks you perform

How these are organised (for eg. who do you receive tasks from, who signs of, etc)

Do you perform tasks in a standardised way or do you often have to use initiative?

What kinds of things can go wrong in your particular job?

Are fault-finding tasks usually carried out by yourself or by a professional, or jointly?

What tools do you use in carrying out your daily work tasks? (Computer programmes, etc.)

What materials do you use in carrying out your daily work tasks? (Paper, metal, etc.)

What forms of knowledge are required in your job?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of knowledge	Rating
Formal knowledge (scientific laws and principles learned through study)	
Situated or practical knowledge (learned through on-job experience)	
Knowledge of rules and procedures (as written up in company manuals)	
Other (specify)	
Discussion	

What forms of skill are required in your job?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of skills/competencies	Rating
Hand dexterity or manual skills	
Diagnostic and reasoning skills	
Planning, organising and time management skills	
Other (specify)	
Discussion	

SECTION E: BOUNDARY WORK

Do you work together with professionals in a team setting?

Not at all	Occasionally	Frequently

Do you think it is necessary for the success of projects to work in teams with other professionals? Why do you say so?

Probes: For what purposes is teamwork between professionals and artisans usually required? Is this more prone in certain trades or departments in your organisation?

Probes: In these instances, what do you feel an artisan contributes? How does this differ from the contribution of a professional? (i.e. types of knowledge, skills, competencies, abilities).

Reflecting on these instances, would you rate these interactions as difficult?

All of the time	Sometimes	Never

Why is that so?

Do disputes or conflicts often arise in these teamwork situations?

Probes: In which settings or situations do they usually arise?

Probes: Please give examples where conflicts have arisen and you have successfully resolved them? (try to establish whether syntactic, semantic or pragmatic approach is used)

Probes: Please give examples where you were unable to resolve conflicts? Who would you typically call for assistance when conflicts arise?

SECTION F: OCCUPATIONAL IDENTITY

What would you say are important attributes or skills an artisan should have? Is there anything specific to your trade that you think would be important?

How does it differ from the skills needed by a professional?

Do you have aspirations to further your training? What steps (if any) have you taken to further your education/increase your skill set? Why do you/don't you feel it important to do this?

In closing, what would you say is the key difference between an artisan and a professional?

INSTRUMENT 1B: SEMI-STRUCTURED INTERVIEW – HR/SUPERVISOR

SECTION A: PROFILE OF RESPONDENT

Gender		Race				Age			Sector	Trade	Region	Size of company			
M	F	B	C	W	Other	18-29	30-45	46-65				XS	S	M	L

SECTION B: INTRODUCTORY QUESTIONS

1. Please provide a brief resume of your career? (Where do you come from? Where did you study? How did you come to be in your present job?)

2. What does your job entail? What functions do you provide to employees?

SECTION C: OCCUPATIONAL MILIEU AND LABOUR MARKET

3. Given your experience in the labour market and this organisation specifically, (note date and extent of experience), what do you consider to be the major changes to work?

4. Would you say these changes have impacted on the skills and knowledge requirements in your sector:

In relation to (insert the specific types being interviewed at organisation) artisans?

In relation to (insert specific types being interviewed at organisation) professionals?

5. Judging from the artisans entering into your organisation, do you feel that the correct set of skills for work are being produced by the artisanal education and training system? How would you say that this compares to the training of professionals entering into your organisation?

6. What opportunity structure and provisions for mobility exist in your organisation for artisans? And professionals?

7. Have there been changes in recent years in the organisation's recruitment of new staff? For eg. 'categories/types' of employees? (Qualifications, competencies and/or experience valued more?)

SECTION D: BOUNDARY WORK

8. Can you provide me with your organisation's organogram?

9. Would you be able to share a typical job description of an artisan and a professional in your organisation?

10. How would you define the difference between the daily work activities of an artisan in comparison to a professional?

11. Do artisans and professionals in your organisation work together in a team setting?

Not at all	Occasionally	Frequently

12. Based on your experience at this organisation, would you say this is something that has changed over the last few years?

13. Do you think it is necessary for the success of projects for artisans and professionals to work in teams?

14. For what purposes is teamwork between professionals and artisans usually required? Is this more prone in certain trades or departments in your organisation?

15. What do you feel an artisan contributes in these situations? How does this differ from contribution of a professional? (i.e. types of knowledge, skills, competencies, abilities).

SECTION E: BOUNDARY OBJECTS

16. Can you please describe the general work organisation of artisans and professions in your organisation? Please discuss this with reference to the following:

The range or types of tasks performed

Who they usually you receive tasks from, who signs of?

Are tasks performed in a standardised way or do they often have to use initiative?

Do they usually carry out fault-finding tasks on their own or jointly?

17. What forms of knowledge are required in these occupations?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of knowledge	Prof	Artisan
Formal knowledge (scientific laws and principles learned through study)		
Situated or practical knowledge (learned through on-job experience)		
Knowledge of rules and procedures (as written up in company manuals)		
Other (specify)		
Discussion		

18. What forms of skill are required in these occupations?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of skills/competencies	Prof	Artisan
Hand dexterity or manual skills		
Diagnostic and reasoning skills		
Planning, organising and time management skills		
Other (specify)		
Discussion		

19. Reflecting on instances where artisans and professionals have to work together, would you rate these interactions as difficult?

All of the time	Sometimes	Never

20. Why is that so?

21. Do disputes or conflicts often arise in these teamwork situations?

In which settings or situations do they usually arise?

Please give examples where conflicts have arisen and they have successfully been resolved? (Probe to establish whether syntactic, semantic or pragmatic approach).

Please give examples where conflicts were not successfully resolved.

SECTION F: OCCUPATIONAL IDENTITY

22. What would you say are important attributes or skills an artisan should have?

23. How does it differ from the skills needed by a professional?

24. Please comment on the status you feel is associated with an artisan? Does this differ from how you view a professional?

25. In closing, what would you say is the key difference between an artisan and a professional?

INSTRUMENT 1C: SEMI-STRUCTURED INTERVIEW – PROFESSIONAL

SECTION A: PROFILE OF RESPONDENT

Gender		Race				Age			Sector	Trade	Region	Size of company			
M	F	B	C	W	Other	18-29	30-45	46-65				XS	S	M	L

SECTION B: INTRODUCTORY QUESTIONS

1. Please provide a brief resume of your career? (Where do you come from? Where did you study? What kind of training did you complete? How did you come to be in your present job?)

SECTION C: OCCUPATIONAL MILIEU AND LABOUR MARKET

2. Since you have completed your training and given your experience in the labour market (note date and extent of experience), what do you consider to be the major changes to work in your sector of employment?

3. Would you say these changes have impacted on the following aspects in relation to the labour market requirements for your occupation:

skills (eg. problem-solving, language and literacy, mathematical),

knowledge (eg. discipline specific or not)

materials used

tools used

work organisation (eg. teams, central or decentralised management)

4. Do you feel that these changes are being taken up in training for your occupation? How? How would you rate the extent of alignment between the curriculum at the institution where you trained and the work you do now?

None	Some	Substantial

5. Do you feel that the changes to your work/sector have had an impact on how your job is viewed or the contribution you as a professional can make?

SECTION D: BOUNDARY OBJECTS AND BOUNDARY WORK

6. What work do you do on a daily basis? Please discuss this with reference to the following:

Please describe the range or types of tasks you perform

How are these organised (for eg. who do you receive tasks from, who signs of, etc)

Do you perform tasks in a standardised way or do you often have to use initiative?

What kinds of things can go wrong in your particular job?

Are fault-finding tasks usually carried out by yourself or by an artisan, or jointly?

7. What tools do you use in carrying out your daily work tasks? (Computer programmes, etc.)

8. What materials do you use in carrying out your daily work tasks? (Paper, metal, etc.)

9. What forms of knowledge are required in your job?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of knowledge	Rating
Formal knowledge (scientific laws and principles learned through study)	
Situated or practical knowledge (learned through on-job experience)	
Knowledge of rules and procedures (as written up in company manuals)	
Other (specify)	
Discussion	

10. What forms of skill are required in your job?

Please use the rating scale below to allocate a rating to each item.

Rating scale: 3 = "all of the time", 2= "sometimes", 3= "Never"

Types of skills/competencies	Rating
Hand dexterity or manual skills	
Diagnostic and reasoning skills	
Planning, organising and time management skills	
Other (specify)	
Discussion	

11. Do you work together with artisans in a team setting?

Not at all	Occasionally	Frequently

12. Do you think in the present day and age that it is necessary for the success of projects to work with artisans in teams?

13. For what purposes is teamwork between professionals and artisans usually required? Is this more prone in certain trades or departments in your organisation?

14. What do you feel an artisan contributes in these situations? How does this differ from contribution of a professional? (i.e. types of knowledge, skills, competencies, abilities).

15. Reflecting on these instances, would you rate these interactions as difficult?

All of the time	Sometimes	Never

15. Why is that so?

16. Do disputes or conflicts often arise in these teamwork situations?

Probes: In which settings or situations do they usually arise?

Probes: Please give examples where conflicts have arisen and you have successfully resolved them? (try to establish whether syntactic, semantic or pragmatic approach is used)

Probes: Please give examples where you were unable to resolve conflicts? Who would you typically call for assistance when conflicts arise?

SECTION F: OCCUPATIONAL IDENTITY

17. What would you say are important attributes or skills a professional should have? Is there anything specific to your occupation that you think would be important?

18. How does it differ from the skills needed by an artisan?

19. Do you have aspirations to further your training? What steps (if any) have you taken to further your education/increase your skill set? Why do you/don't you feel it important to do this?

20. In closing, what would you say is the key difference between an artisan and a professional?

SECTION A: PROFILE OF RESPONDENTS

| Gender | | Race | | | | Age | | | Sector | Trade | Region | Learn/ | Size of company | | | |
M	F	B	C	W	Other	18-29	30-45	46-65				Apprent	XS	S	M	L

SECTION B: INTRODUCTORY STATEMENT AND QUESTION

Can everyone briefly introduce themselves, and also, briefly explain their motivations to enter into the specific artisanal trade? As explained in the consent form, in general we are interested in finding out your views and want you to reflect on your personal experience as an artisan in relation to the changes to the nature of your work. We are interested in how you think this has/might have impacted on your current notions of identity and in relation to expert occupations in South Africa.

SECTION C: OCCUPATIONAL MILIEU AND LABOUR MARKET

1. Since you have completed your training and given your experience in the labour market, what do you consider to be the major changes to work in your respective trades?

2. Would you say these changes have impacted on the following aspects in relation to the labour market requirements in your sector in terms of:

skills (eg. problem-solving, language and literacy, mathematical)

knowledge (eg. discipline specific or not)

work organisation (eg. teams, central or decentralised management)

3. Do you feel that these changes are being taken up in artisanal education and training? How?

4. What structure and provisions for mobility exist in your organisation for artisans?

5. Have there been changes in recent years in the organisation's recruitment of new staff? For eg. 'categories/types' of employees? (Qualifications, competencies and experience)

SECTION D: BOUNDARY WORK

6. Do you work together with professionals in a team setting?

7. Do you think it is necessary for the success of projects to work in multidisciplinary teams?

8. For what purposes is teamwork between professionals and artisans usually required?

9. What do you feel an artisan brings in these situations? Does this differ from contribution of a professional? (i.e. types of knowledge, skills, competencies, abilities).

SECTION E: BOUNDARY OBJECTS

10. Reflecting on instances where you had to work together with a professional, how would you characterise these interactions?

11. Do disputes or conflicts often arise in these teamwork situations?

12. Who would you typically call for assistance when conflicts arise?

13. Which strategies appear to be successful in mediating such conflicts?

SECTION F: OCCUPATIONAL IDENTITY

14. What would you say are important attributes (knowledge, skills, capabilities) an artisan should have?

15. How does it differ from what is needed from a professional?

16. How do you relate your status to that of a professional?

17. Do you feel that the changes to your work/sector have had an impact on how your job is viewed or the contribution you as an artisan can make?

18. How do you feel about further training?

19. Why do you/don't you feel it important to do this?

INSTRUMENT 2B: FOCUS GROUP INTERVIEW - PROFESSIONALS

SECTION A: PROFILE OF RESPONDENTS

Gender		Race				Age			Sector	Occupat	Region	Type of training	Size of company			
M	F	B	C	W	Other	18-29	30-45	46-65					XS	S	M	L

SECTION B: INTRODUCTORY STATEMENT AND QUESTION

Can everyone briefly introduce themselves, and also, briefly explain their motivations to enter into the specific occupation? As explained in the consent form, in general we are interested in finding out your views and want you to reflect on your personal experience as professional in relation to the changes to the nature of your work. We are interested in how you think this has/might have impacted on your current notions of identity and in relation to working with artisans in South Africa.

SECTION C: OCCUPATIONAL MILIEU AND LABOUR MARKET

1. Since you have completed your training and given your experience in the labour market, what do you consider to be the major changes to work in your respective professions?

2. Would you say these changes have impacted on the following aspects in relation to the labour market requirements in your sector in terms of:

skills (eg. problem-solving, language and literacy, mathematical)

knowledge (eg. discipline specific or not)

work organisation (eg. teams, central or decentralised management)

3. Do you feel that these changes are being taken up in training?

4. Have there been changes in recent years in the organisation's recruitment of new staff? For eg. 'categories/types' of employees? (Qualifications, competencies and experience)

SECTION D: BOUNDARY WORK

5. Do you work together with artisans in a team setting?

6. Do you think it is necessary for the success of projects to work in such teams?

7. For what purposes is teamwork between professionals and artisans usually required?

8. What do you feel an artisan brings in these situations? Does this differ from contribution of a professional? (i.e. types of knowledge, skills, competencies, abilities)

SECTION E: BOUNDARY OBJECTS

9. Reflecting on instances where you had to work together with an artisan, how would you characterise these interactions?

10. Do disputes or conflicts often arise in these teamwork situations?

11. Who would you typically call for assistance when conflicts arise?

12. Which strategies appear to be successful in mediating such conflicts?

SECTION F: OCCUPATIONAL IDENTITY

13. What would you say are important attributes (knowledge, skills, capabilities) professional should have?

14. How does it differ from what is needed from an artisan?

15. How do you relate your status to that of an artisan?

16. Do you feel that the changes to your work/sector have had an impact on how your job is viewed or the contribution you as a professional can make?

17. How do you feel about further training?

18. Why do you/don't you feel it important to do this?

INSTRUMENT 3: RESEARCHER OBSERVATIONS

SITE_____

Note to the researcher: The analytical template is aimed to facilitate the noting of dynamic processes in action in relation to boundaries. At the end of each research day we would like you to capture your general assessment of the contexts within which boundary work (crossing, maintenance) might occur, in relation to which aspects (knowledge, skills, professionalism, competencies), most used objects, and aspects you assess to be important in the participant's portrayal of their identities. The dimensions and indicators are just suggestions based on research in the field and experience in similar projects, but be open to other dimensions, or indicators.

KEY CONCEPTS OF INTEREST		INTEREST	INDICATOR	OBSERVATION
Symbolic boundaries and boundary work	Work	Context/ Setting	Meeting	
			Interview	
			Other	
		Kind	Crossing	
			Maintenance	
			Other	
		Bases	Knowledge	
			Skills	
			Other	
		Who	Professional	
			Artisan	

			Other	
	Objects	What	Drawing	
			Other	
		Approach	Syntactic	
			Semantic	
			Pragmatic	
			Other	
Social boundaries and identity	Occupational/ work identity	Change	Knowledge	
			Skills	
			Other	
		Bases	Race	
			Age	
			Other	

Appendix B: Working definitions of additional key concepts

Occupational milieu	Physical, social and cultural setting or environment in which people work or practice their occupation.
Occupational identity	Work-based social group concept that affects the roles people adopt and the corresponding ways they behave when performing their work
Occupational structure	The aggregate distribution of occupations in society, classified according to skill level, economic function, or social status
Occupational group	Set of jobs whose main tasks and duties are characterised by similarity of skill and specialisation.
Artisan	The most common and simplistic understanding of an artisan is that it is an individual that is skilled at practicing a particular trade or handicraft. In South Africa, the notion of artisan appears strongly related to a particular type of industrial work and the skills also are associated strongly with manual as opposed to mental work.

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