

MAPPING PARTNERSHIPS AND INTERACTIVE CAPABILITIES IN SKILLS DEVELOPMENT SYSTEMS

A guide to fieldwork in firms

RESEARCH INSTRUMENT 5: *This research guide provides instruments for gathering information on the partnerships and capabilities of firms to form effective partnerships and learn through interaction – i.e. interactive capabilities. Understanding partnerships and interactive capabilities in the formal private sector can yield evidence that complements and adds to the quantitative data traditionally used for skills planning. The guide should be read in conjunction with a set of related research guides: 1) a guide to understanding the research framework, design and methodology, 2) a set of fieldwork templates for gathering similar information on other key actors in skills development networks, including universities, TVET colleges, and intermediaries such as the Sector Education and Training Authorities (SETAs); and 3) a guide to analysing the information gathered.*

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May 2016



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LMIP PROJECT: A STUDY OF LABOUR MARKET INTERACTIVE CAPABILITIES,
STRUCTURES AND MECHANISMS IN DIVERSE POST-SCHOOL EDUCATION AND
TRAINING INSTITUTIONAL SETTINGS

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ACRONYMS

DHET	Department of Higher Education and Training
HSRC	Human Sciences Research Council
LMIP	Labour Market Intelligence Partnership
PSET	Post-school Education and Training
SETA	Sector Education and Training Authority
SMME	Small, Medium and Micro Enterprise
SSI	Sectoral System of Innovation
TVET	Technical and Vocational Education and Training

Introduction

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 in creating a strategic labour market intelligence system.

This set of research guides is based on an LMIP project: *A study of labour market interactive capabilities, structures and mechanisms in diverse post-school education and training institutional settings*. The study investigated ways in which alignment between public and private education and training providers, and firms and labour markets, can be improved. The researchers designed a framework and a set of instruments for collecting and analysing data on organisational capabilities and interaction in skills development networks. It used these to analyse practices within three sectoral systems: sugarcane growing and milling in Kwa-Zulu Natal, automotive components manufacturing in the Eastern Cape, and astronomy, specifically the Square Kilometre Array big-science project.

In a changing policy landscape, universities and TVET colleges are challenged to improve their responsiveness to skills needs, and Sector Education and Training Authorities (SETAs) are expected to improve their performance as intermediaries (see DHET 2013). New regulatory instruments require that these post-school education and training organisations work more closely with key stakeholders in their local settings, such as firms and local government. To improve responsiveness, universities, TVET colleges and SETAs are required to improve their understanding of skills needs in their local settings, and gather information on their partnerships and linkages with other education and training organisations, employers, and so on.

The LMIP research team thus offer a set of research guides, as one set of tools skills and strategic planners and researchers in the DHET, universities, TVET colleges and SETAs can use to inform their skills planning processes. We offer a conceptual framework, practical guidelines and templates for research on skills development partnerships and networks, and the capabilities of universities, TVET colleges and SETAs to form effective partnerships towards improving alignment between skills demand and supply.

Purpose of this research guide

This research guide (**Research Instrument 5**) provides a practical guide and set of templates for gathering information on the partnerships and capabilities of firms to form effective partnerships and learn through interaction – i.e. their interactive capabilities. The objective is to understand how a firm is organised to facilitate interaction with universities, TVET colleges and other actors such as SETAs and industry associations, to inform their training activities, in terms of the forms of work-based learning that firms engage in. Such an understanding can yield evidence that complements and adds to the quantitative data traditionally used for skills planning. The instruments are suitable for research in both public and private firms.

This document should be read in conjunction with a set of research guides and templates, as listed in Table 1 below. **Research Instrument 1** describes the framework and methodology underpinning the research. **Research Instrument 2** provides a template for conducting a sectoral overview, which is a

useful resource to guide the fieldwork. **Research Instruments 3 to 6** provide detailed practical guidelines and templates for gathering information on partnerships and interactive capabilities. Each focuses on a key type of organisation in skills development systems: universities, TVET colleges, firms, and intermediaries. We also include a separate document, **Research Instrument 7**, which provides a guide to analysing the information gathered.

Table 1 Description of the research guides

Document number	Description of document
1	A framework and methodology to guide research
2	Guide and template for conducting a sectoral overview
3	Fieldwork guide and template for research in universities
4	Fieldwork guide and template for research in TVET colleges
5	Fieldwork guide and template for research in firms
6	Fieldwork guide and template for research in SETAs and other intermediaries
7	Data management and analysis strategy and instruments

Structure of this research guide: Fieldwork guide and template for research in universities

Section 1 defines the concept of interactive capabilities in relation to firms, and describes one way to gather information on such capabilities.

Section 2 includes a set of research templates.

Section 3 includes two additional resources: a sample questionnaire on partnerships and interaction, and a sample informed consent form.

Key terms and concepts

Table 2 provides a summary of the key terms and concepts used in this document. It is a useful glossary that can be referred to repeatedly, in each section of the guide.

Table 2 A summary of key terms and concepts

Sectoral system of innovation	“(S)ets of actors organised around specific types of productive activities and technologies” (e.g. sugarcane milling), within distinct geographical (e.g. in KwaZulu-Natal) and institutional settings (e.g. policy) ¹ .
Competencies	The pre-set attributes of organisations (and individuals), including expertise, human resources, organisational routines and structures, technologies, formal policies or other physical resources ² .
Interactive capabilities	The capacity to form effective linkages with other organisations and use existing competencies to learn through interaction ³ .
Dynamic interactive capabilities	The capacity to sense changes in the environment relevant to the organisation, and take an effective and timeous response through strategic management.
Institutions	Rules or guides for behaviour, distinguished between: formal (e.g. national policy) and informal (e.g. organisational culture), binding (specific regulations) and created by interaction (e.g. contracts), national (e.g. patent system) and sectoral (e.g. sectoral labour markets) institutions.
Social skill	The ability to form linkages, work in a team and “induce cooperation among actors in an organisation or any other field” ⁴ .
Post-school education and training (PSET) organisations	Diverse set of private and public education and training organisations – that is, universities, universities of technology, vocational education and training organisations (TVET), private colleges, private higher education institutions, and other training providers (e.g. AET public and private institutions, training centres operated by industry associations, etc.).
Sectoral intermediaries	Organisations in sectoral systems of innovation that facilitate interaction, and translate and facilitate information flows ⁵ as well as offer services (e.g. training) that are not easily available in the system but are essential.
Private intermediaries	Sectoral intermediaries such as industry associations and research institutes that tend to focus more on industry or firm-specific issues.
Public intermediaries	Sectoral intermediaries such as SETAs that tend to focus on public good objectives, especially those related to policy.
Actors	Participants or stakeholders in skills development systems, which could include individuals, organisations or units within organisations.

¹ Malerba (2005)

² See von Tunzelmann and Wang (2003)

³ von Tunzelmann and Wang (2003, 2007 in Iammarino, 2009)

⁴ Fligstein and McAdam (2012: 46)

⁵ van Lente et al (2003: 248)

Section 1. Fieldwork in firms

What are firm interactive capabilities?

It is important to understand the skills needs of firms and how they meet those needs in the context of rapid change in technology and consumer demand, and dynamic competition.

Figure 1 below illustrates what we mean by interactive capabilities. It shows key dimensions for building such capabilities – competencies, and internal and external interface structures – with *possible features* of each for illustrative purposes. For reasons related to feasibility, we will focus mainly on the capability building mechanisms and needs of firms, as highlighted in red on the right hand side of the diagram.

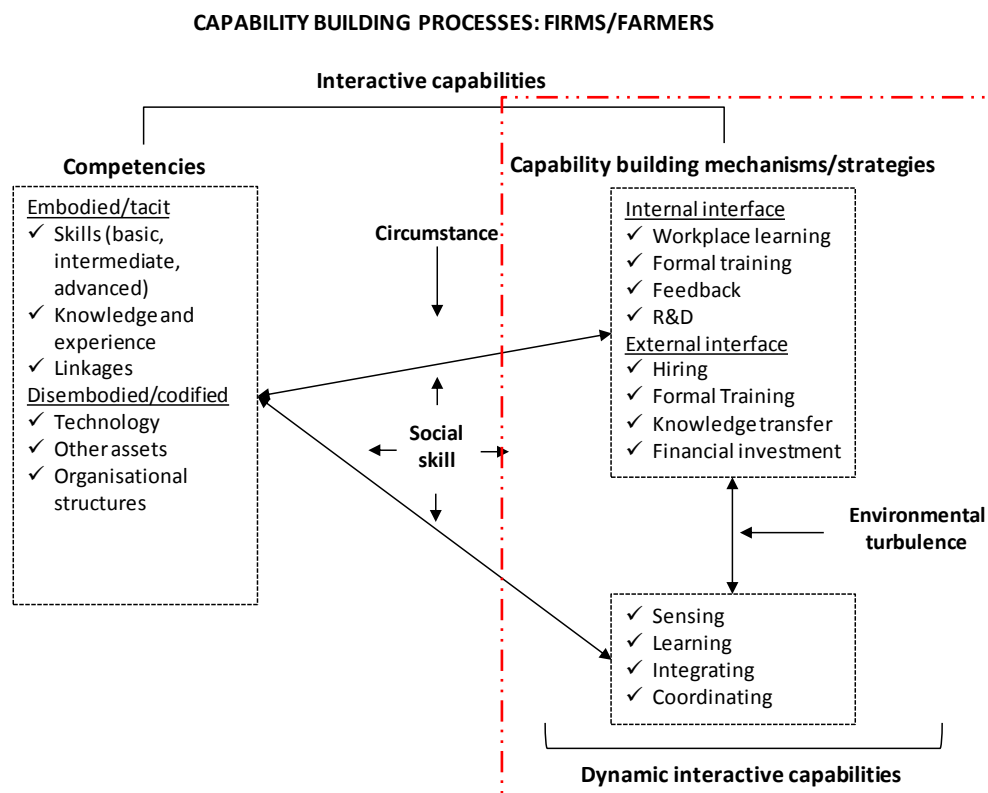


Figure 1 Capability building processes at the organisational level - a generic framework for firms

Note: The diagram illustrates some generic competencies, and internal and external mechanisms required for building interactive capabilities. The lists of examples are thus not exhaustive.

Competencies refer to knowledge, held at the individual or organisational level, that facilitates the formation of effective partnerships and learning through interaction to improve responsiveness. We distinguish between *tacit competencies* that are embodied in human resources and organisational routines, and *codified competencies* which include appropriate formal structures, formal policy, technology, and other assets.

External interface structures refer to the different mechanisms and strategies firms use to interact and partner with other organisations such as SETAs and universities. Whereas *internal interface*

structures refer to the mechanisms and strategies they use for learning and accumulating knowledge gained through their interactions, essentially how they use the knowledge to inform their training and research. We argue that the effectiveness of a firm's internal and external interface structures depend on the appropriateness and effectiveness of its competencies and vice versa. Firms can build and refine their competencies through their internal and external interface structures. In this way, a firm builds its *interactive capabilities*.

Figure 1 also highlights the need for *dynamic* interactive capabilities, i.e. the ability to sense relevant changes in the environment and effect an appropriate response which may include putting in place a new routine or unit, improving coordination, integrating change across the firm, and so on. The social skill of firm leaders is thus important for building such capabilities. We argue that the policy, educational and economic environments influence opportunities available to a firm. One example is national policy that promotes and funds university-industry interaction. Another example is how rapid change in technology leads to new skills needs in a specific sector, prompting firms to work more closely with universities to ensure a pipeline of appropriately skilled human resources.

Research Instrument 1 provides a more detailed description of the conceptual framework, research design and methodology. **It is thus important that you use this document in conjunction with Research Instrument 1.**

How do you gather information on a firm's interactive capabilities?

We provide five templates to guide the fieldwork:

- A **structured schedule** to gather basic information pertaining to the firm's competencies in general, and in relation to the relevant fields (Schedule 1)
- A semi-structured **interview** schedule to explore interactive capabilities (Schedules 2 and 3)
- A **questionnaire** on dynamic interactive capabilities (Schedule 4)
- A **questionnaire** on partnerships and interaction to record who interacts with whom and how (Schedule 5)

Table 3 below provides a **generic plan for adaptation in each firm context**, to plan the data gathering and analysis

We suggest that the researcher firstly conducts a desktop search of the firm's website and relevant internet resources to identify key people for interview but there will be a process of snowballing once you are in the firm, as key informants are identified for follow up. Interviewees at each firm may include *Human Resource managers, managers of training programmes and any other individuals responsible for skills development and technological change at the firm.*

The generic plan for data gathering and analysis, which should be adapted for each firm context, provides a guide for using the schedules and templates (see Table 3).

Table 3 Generic plan for data gathering and analysis

FIRMS IN THE SECTOR		
INSTRUMENT	UNIT	SOURCE
Interviews (<i>Schedule 1</i>)	One per firm	Desktop research, interviews with all managers
Interviews (<i>Schedules 2, 3, 4 and 5</i>)	One per interviewee	Human Resource Managers, training managers
Analytical Template	One per firm	Desktop research, interviews with all managers

Section 2. Research instruments

Below we provide templates for the set of interview schedules and questionnaires referred to above:

- SCHEDULE 1: Background information
- SCHEDULE 2: Semi-structured interview schedule for Human Resource Managers and Training Programme Managers
- SCHEDULE 3: Semi-structured interview schedule for firm unit managers
- SCHEDULE 4: Sensing, learning, coordinating
- SCHEDULE 5: Questionnaire on partnerships and interaction

We also include some useful resources in the appendix:

- A sample questionnaire on strategies and mechanisms for meeting skills needs
- A sample informed consent form

Although the research is not considered to be of a sensitive nature, general ethics guidelines for research in the social sciences stipulates that participation in research should be voluntary and that all participants should be informed of the nature of the research. You may thus be required to retain proof of informed consent. The sample form in the appendix covers key ethical concerns and can be adapted to the particulars of your study.

_____ **FIRM** (add name)

SCHEDULE 1: Background information

Please indicate the year for which you have supplied data

Year	
-------------	--

List all the offices of the firm, and their location (GPS coordinates if possible).

Name of firm	
Ownership	
Main product	
Firm size (total number of employees)	
Typical jobs	
Role in the sectoral system of innovation (e.g. small sugar cane miller)	
Location (town/city/village, province)	
GPS coordinate (if possible)	
Main knowledge and technology base of sector and how firm keeps up with the technology	
Main skills currently provided by education and training organisations	
Main skills gaps	

SCHEDULE 2: Semi-structured interview schedule for Human Resource Managers and Training Programme Managers

We are interested in finding out how your firm identifies and responds to skills needs, and the education and training organisations that can meet your firms' requirements.

Knowledge and technology in the sector and related skills needs

1. What is the main knowledge and technology challenge you are facing as a firm in the Sugar sector?
2. What kinds of skills does that require, at all levels of your operation?
3. Where does your firm experience a smooth pipeline, major bottlenecks or gaps in skills supply?

Strategies for meeting changing skills needs

4. What strategies does your firm use for meeting its training and skills needs in general? How do you identify appropriate education and training organisations?
5. How does your firm respond to *changes* in skills needs occurring due to rapid changes in technology and consumer demand?
6. What strategies or mechanisms are important for ensuring that skills keep up with such changes in the environment?
7. What are your successes and failures of working with education and training organisations directly or indirectly, to address changing skills needs?

Changes proposed to education and training and skills development

8. Based on your experience of skills planning and training co-ordination, what changes are required to improve the responsiveness of education and training organisations to meet skills needs in the sector, and improve the employability of graduates?

SCHEDULE 3: Semi-structured interview schedule for firm unit managers

We are interested in finding out to what extent the units in the firm interact with education organisations in terms of training programme needs, and how graduates are supported to gain the skills relevant to the labour market.

Interaction with education institutions

1. Do you have any interaction with education and training institutions in the *sector*? If so, what kind of interaction?
2. What is your motivation for forming linkages with education and training institutions?

Interactive capabilities in relevant fields

3. What are the mechanisms and strategies in place to promote more effective interaction with education and training institutions and ensure the skills demand of the *sector* are responded to by education institutions?
4. What are the successes of your linkages with education and training institutions in the *sector*?
5. What are the main facilitators and obstacles to interaction with education and training institutions? Where have you encountered blockages?

Dynamic interactive capabilities in relevant fields

1. Are education and training institutions aware of changes in the *sector* over the past five years? How have you interacted with education and training institutions to address changes?
2. Who do you involve and how, in the planning and coordination of the training activities in your firm?
3. Are your training activities kept up to date with changes in education policy? Please describe how this takes place.
4. In which ways, if any, would you like to see education and training institutions' policies, structures, and strategies changed to improve their responsiveness to skills demand in the *sector*?

SCHEDULE 4: Sensing, learning, coordinating

This schedule should be completed by the Heads of the relevant firm units

We would like to know more about change in the sector that is relevant for your firm, and the effectiveness of your firm in sensing and addressing such changes.

Please rate the effectiveness by which your firm senses and addresses changes in the business and education environments that are relevant for your firm.

Position in the firm: _____

Dynamic interactive capability	Very effective	Effective	Somewhat effective	Not effective
	1	2	3	4
Sensing capability				
We frequently scan the environment to identify new business opportunities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We periodically review the likely effect of changes in our business environment on customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We often review our product development efforts to ensure they are in line with what the customers want.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We devote a lot of time implementing ideas for new products and improving our existing products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning capability				
We have effective routines to identify, value, and import new information and knowledge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have adequate routines to assimilate new information and knowledge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are effective in transforming existing information into new knowledge.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are effective in utilizing knowledge into new products.				
We are effective in developing new knowledge that has the potential to influence product development.				
Integrating capability				
We are forthcoming in contributing our individual input to the firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We have a global understanding of each other's tasks and responsibilities in the firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are fully aware who in the firm has specialized skills and knowledge relevant to our work.				
We carefully interrelate our actions to each other to meet changing conditions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff members manage to successfully interconnect their activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coordinating capability				
We ensure that the output of our work is synchronized with the work of others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We ensure an appropriate allocation of resources (e.g., information, time, reports) within our firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff members are assigned to tasks commensurate with their task-relevant knowledge and skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We ensure that there is compatibility between staff members expertise and work processes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall, our firm is well coordinated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please indicate the extent to which you agree with the following statements, specifically in relation to **change in your sector**.

Environmental Turbulence	Strongly Agree	Agree	Agree Somewhat	Disagree
	1	2	3	4
The technology in this product area is changing rapidly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technological breakthroughs provide big opportunities in this product area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In our kind of business, customers' product preferences change a lot over time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing practices in our product area are constantly changing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
New product introductions are very frequent in this market.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The environment in our product area is continuously changing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental changes in our industry are very difficult to forecast.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skills needs change frequently in our sector and so, are difficult to forecast.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SCHEDULE 5: Questionnaire on partnerships and interaction

To what extent do you interact with any of **these external actors to inform your training activities, specifically in relation to the sector?** We are interested in interaction related to the **(insert programmes of interest for the sector)** programmes offered by your firm and **any direct linkages** you have with universities, SETAs and any other organisations involved in **sector**. Please also indicate the main goal(s) and deliverable(s) of each partnership.

Position in the firm: _____

External social actors	Not at all	Isolated instances	Moderate scale	On a wide scale	Main goal of the partnership	Main deliverable of the partnership
	1	2	3	4		
List all of the key stakeholders in the local economic context. A sample questionnaire is provided in the Appendix.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Section 3. Appendices

Appendix 1 Sample Questionnaire on partnerships and interaction – related to the Sugar sector (Schedule 5)

To what extent do you interact with any of **these external actors to inform your teaching activities, specifically in relation to the sugar sector?** We are interested in interaction related to the **agricultural and engineering programmes** offered by your university and **any direct linkages** you have with firms, SETAs and any other organisations involved in the sugar sector. Please also indicate the main goal(s) and deliverable(s) of each partnership.

Position in the firm: _____

External social actors	Not at all 1	Isolated instances 2	Moderate scale 3	On a wide scale 4	Main goal of the partnership	Main deliverable of the partnership
SETAs						
AgriSETA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
MerSETA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other SETAs (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sectoral intermediaries						
South African Sugar Association Council (umbrella organisation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SA Cane Growers Association	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Local grower councils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SA Sugar Millers' Association Limited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
SA Sugarcane Research Institute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sugar Milling Research Institute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sugar Manufacturing and Refining Association	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
National Bargaining Council for the Sugar Manufacturing and Refining Industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other sectoral intermediaries (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Government intermediaries						
National Agricultural Marketing Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Department of Agriculture & Environmental Affairs KZN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Department of Agriculture, Forestry and Fisheries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other provincial and national government intermediaries (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Universities						
University of KwaZulu Natal - College of Agriculture, Engineering and Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
University of KwaZulu Natal – other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
University of Zululand – Department of Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

External social actors	Not at all	Isolated instances	Moderate scale	On a wide scale	Main goal of the partnership	Main deliverable of the partnership
	1	2	3	4		
University of Zululand – Physics and Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
University of Zululand – other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Mangosuthu University of Technology – Department of Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Mangosuthu University of Technology – Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Durban University of Technology – Engineering and the Built Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Durban University of Technology – Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other national and international universities/university departments (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
TVET colleges						
Coastal FET College (Mobeni)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Elangeni FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Esayidi FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Majuba FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Mnambithi FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Mthashana FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Thekwini FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Umfolozi FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Umgungu-ndlovu FET College	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other public FET colleges (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Agricultural colleges						
Cedara College of Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Owen Sitole College of Agriculture (OSCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other private colleges (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Private training providers						
Shukela Training Center (SASA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
South African Sugarcane Research Institute Training Programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sugar Milling Research Institute Training Programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
The South African Cane Growers' Association Training Programme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
AGB Mathe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other private training providers (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Farmers/Growers						

External social actors	Not at all	Isolated instances	Moderate scale	On a wide scale	Main goal of the partnership	Main deliverable of the partnership
	1	2	3	4		
Small-scale farmers (non-commercial)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Commercial farmers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sugar Milling Estates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Grower groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other farmers/growers:						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Firms						
Illovo Sugar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Tongaat Hulett	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Transvaal Sugar Limited (Tsb) (Mpumalanga)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Transvaal Sugar Limited (Tsb) (KwaZulu Natal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Gledhow Sugar Company (PTY)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Union Cooperative Limited	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Umfolozi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other firms (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Other organisations (specify):						
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

If interaction with growers is indicated, please indicate the number of growers and where they are located where possible.

	Growers	Number	Location 1	Location 2	Location 3
6	Local grower councils				
57	Small-scale farmers (non-commercial)				
58	Commercial farmers				
59	Sugar Milling Estates				
60	Grower groups				

Appendix 2 Sample informed consent form

PARTICIPANT INFORMATION SHEET

To conduct interviews with individuals within firms

Hello, I am (insert the researcher's name). I am part of a research team led by (insert your organisation's name).

(Provide a description of the research and the objective of the research. For example -

The current project aims to investigate how interaction and alignment between diverse types of education and training systems and labour markets can be enhanced in a differentiated post-school sector. The research will focus on capabilities in the public and private Higher Education, Further Education and Training and SETA skills development systems, to interact with labour market stakeholders, to address their skills needs. We hope this research will identify appropriate change mechanisms, and hence, provide systemic knowledge to direct funding and interventions where DHET can have leverage in future.)

We have chosen to focus our empirical investigation on four sectoral systems of innovation. Your branch has been identified as one of the key actors in the sectoral network.

The interview is designed to last 45 minutes. We will ask you to reflect on skills needs, organization and strategic mechanisms that promote or constrain interaction.

Please understand that you are not obliged to take part in this study and the choice whether to participate is yours alone. However, we would really appreciate it if you do share your thoughts and experiences with us. If you choose not to take part, you will not be affected in any way. If you agree to participate, you may stop the interviewer at any time and tell him or her that you do not want to continue, and you will NOT be prejudiced in ANY way.

If you do agree to take part in this study, please note that there will be no direct benefit to you.

We will be recording your name on the interview schedule, but it will not be linked to the answers you give in any way. Only the researchers will have access to the unlinked information. The name of your organization will also be anonymised.

With your permission, I will audiotape and take notes during the interview. The recording is to accurately record the information you provide, and will be used for transcription and analysis purposes only. Your name *will not be recorded* on the transcripts. Instead, a code name will be used to ensure anonymisation. If you choose not to be audiotaped, I will take notes instead. If you agree to being audiotaped but feel uncomfortable at any time during the interview, I can turn off the recorder at your request. Or if you do not wish to continue, you can stop the interview at any time.

(Provide information on how the data will be stored. For example - An electronic copy of the transcripts will be stored in a password protected file for analysis by the project team only. As per the HSRC data preservation policy, the audio recordings and the transcripts will be kept in secure files for five years. Access to the transcripts will be restricted to the project team.)

(Provide information on how the results will be used. For example - The HSRC will share the research results with DHET branches in a number of ways: through a technical task team, a final report, policy

briefs, workshops and policy roundtables; as well as academic dissemination in the form of journal articles.)

The study has been approved by the Research Ethics Committee.

If you are harmed or have any concerns

If you feel that you have been harmed in any way by participating in this study, please call (provide contact details).

CONSENT FORM

I hereby agree to participate in research regarding the interactive capabilities of my department/organisation. I understand that I am participating voluntarily and without being forced in any way to do so. I also understand that I can stop this interview at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not to benefit me personally.

I have received the telephone number of a person to contact should I need to speak about any issues which may arise in this interview.

I understand that my answers will remain confidential.

I understand that (insert organisation's name) will use the results of the completed research.

.....

Signature of participant

Date:.....

I agree / do not agree to have the interview audiotaped. (Please select an option.)

.....

Signature of participant

Date:.....

If you need more information about the project, please call the (provide contact details).