

**AN EVALUATION OF A KNOWLEDGE PARTNERSHIP – A REVIEW OF THE
LITERATURE**

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APRIL – JUNE 2011

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ABSTRACT

Community interaction with universities forms part of the field of engaged scholarship, civic engagement or socially responsive interaction between universities and communities. This type of interaction yields a different form of knowledge production, as universities and communities engage at different levels and different projects develop out of this engagement. One such form of interaction is the science shop. The following literature review examines the theories of engaged scholarship and role of engagement between universities and communities, from an international and South African point of view. This will introduce the UCT Knowledge Partnership Pilot Project – UCT’s first science shop – laying the foundations for a further evaluation of this project over the next two and a half years.

Using a broad array of available literature, the following review will introduce a scholarly overview of the scholarship of engagement, community engagement and social responsiveness. In doing so, it will further lay the foundations for the investigation of the practical brokering model – a practical illustration and manifestation of the theories of engagement.

One of the more popular forms of engagement in a university forum is the science shop. The core idea in writing this review is to explore the idea and principles of the science shop, in order to evaluate the creation of the UCT Knowledge Partnership Pilot Project.

The review will identify the development of the science shop in Europe, North America and Australia, looking at how the shops operate, and how they have been successful or unsuccessful in past years. Having obtained this analysis, the Knowledge Partnership Pilot Project itself will be explained in broader terms, with added analysis and evaluation of science shops.

GLOSSARY

Social responsiveness - *Scholarly based activities(including use-inspired basic research) that have projected and defined outcomes that match or contribute to developmental objectives or policies defined by civil society, local, provincial or national government, international agencies or industry (Favish, 2006: 4).*

Community engagement - *“initiatives and processes through which the expertise of the institution in the areas of teaching and research are applied to address issues relevant to its community. CE typically finds expression in a variety of forms, ranging from informal and relatively unstructured activities to formal and structured academic programmes addressed at particular community needs (service-learning programmes) and some projects might be conducive towards the creation of a better environment for Community Engagement and others might be directly related to teaching, learning and research (HEQC, 2004a, 19 & 26).*

Socially engaged research – *the interconnectedness between research and society in the context of responding to developmental needs (UCT, 2011:1)*

Shop front/ science shop – *“The crucial idea behind the science shops involves a working relationship between knowledge-producing institutions, such as universities, and citizen groups that need answers to relevant questions (Bunders, Leydesdorff, 1987)*

Knowledge Partnership – *“Acting as a bridge between society and the University, the UCT Knowledge Partnership mediates between the two constituencies to jointly reformulate the questions into manageable projects. In the case of research projects, these are allocated to students as projects that are conducted under the supervision of a senior academic, or to academics, who in turn may use it as case material for future research. Projects may also involve service learning or experiential training initiatives. Either way, a report (or another type of product) is produced which is of direct use to the client, while the student work also fulfils criteria towards an academic qualification. For staff, the model provides a framework for research and student training and learning that is grounded in an engagement with society.” (Schmid, 2010)*

THE UNIVERSITY OF CAPE TOWN

EVALUATION OF A KNOWLEDGE PARTNERSHIP – A REVIEW OF THE LITERATURE

CHAPTER ONE – ENGAGING DISCOURSE AROUND SOCIAL RESPONSIVENESS

1.1 Introduction

Knowledge production and research form part of the fabric of a university. Higher education is made up of three facets which engage the use of knowledge production. If we consider knowledge practices in a university context, we need to recognise the three integral processes of higher education – community engagement, research and teaching (Lazarus et al, 2008:60). Academics have traditionally reverted to teaching and research to utilise their skills, for the benefit of university communities, but not necessarily to engage directly with communities. However, the challenges faced by societies today in a globalising context require acknowledgement of the need for universities to connect with communities, to assist in finding solutions for development challenges worldwide.

As a guide to determining university interaction with communities in what has become known as the “scholarship of engagement” (Boyer, 1996: 19, Lazarus et al, 2008:60), the following discussion will explore the available literature assessing guiding principles of engagement between universities and communities. This will include a review of the history of community engagement, service learning and the scholarship of engagement, and the evolution of terminology associated with the practices of engagement. The literature looks at the evolution of discourse associated with engagement, based on the historical redress between universities and communities. Identifying past challenges for universities and communities also considers current societal challenges requiring the need for engaged higher educational institutions. In order to facilitate this investigation, current terminology associated with engaged scholarship will be assessed to compare and problematize the various definitions of community engagement and policy terms. Examining formally instituted processes to create policy documents which reflect attempts to solidify the principles of engagement as part of university practice will further the understanding of how universities have come to terms with the need to use research and teaching to participate wholly in societies in need of knowledge input. The review will look

primarily at South African university experiences of community engagement, drawing on research from academics and groups historically and currently involved in this process.

1.2 The Social Responsiveness Discourse

Universities which engage with communities form part of a social responsiveness network within the academic field. The scholarship of engagement is also characterised by social responsiveness, which includes community engagement, engaged scholarship or service learning¹. In recent years, social responsiveness has come to light as an essential part of academic engagement with universities and broader communities (Lazarus et al, 2008:60). The terminology used to describe the act of social engagement with a community considers various field approaches. The practice and principles of community engagement within a university consider the multi-tiered concepts of social responsiveness and the scholarship of engagement.

The development of the Knowledge Partnership Pilot at UCT and the continuous development of social responsiveness are an indication of how a South African university has faced the need to bridge the divide between scholarship, teaching and community engagement (UCT, 2005:1). The Knowledge Partnership Project, funded by the Vice-Chancellors Strategic Fund, was established according to the science shop or shop-front model, providing community groups with ways to access skills from a university (IPD, 2010:2). The NRF has commissioned a study to evaluate the effectiveness of the Knowledge Partnership Project, considering it is one of the leading science shop projects in South Africa. The evaluation will assess the functioning of the project and its effectiveness in society. The following section will focus on literature problematising the definition of social responsiveness and engagement, exploring the different principles of community engagement, to review how the concept has changed over time.

1.3 Origins of Community Engagement

The starting point for developing community engagement within higher education in South Africa was the introduction of Education White Paper 3 by the Department of Education in 1997 – “A Programme for the Transformation of Higher Education” (Department of Education, 1997:1). The White Paper indicates from the outset that higher education in South Africa needs to undergo transformation in order to address the need for higher education

¹ Research reflects a number of different uses for the term social responsiveness, which can mean community engagement, engaged scholarship and service learning. This review will use the terms social responsiveness, community engagement, engaged scholarship and service learning interchangeably, as each practice is reflected differently in various contexts (McMillan, Pollack, 2010: 1).

institutions to become more involved in reconstruction and development (Department of Education, 1997: 3). The purpose of higher education, as outlined in the document, states that higher education should “address the development needs of society” (Department of Education, 1997: 3) and universities must “demonstrate social responsibility...and their commitment to the common good by making available expertise and infrastructure for community development programmes” (Department of Education, 1997, Hall, 2010:3). One of the concerns raised in the paper is the fact that university education does not engage with societal needs, problems and challenges within Africa – this is cited as being the “ivory tower” syndrome. Hall describes the evolution of the need to bridge the gap between academic research and teaching within the university sphere and communities in need of academic assistance to resolve practical issues. Hall furthers this by identifying the need to challenge the “ivory tower characterisation” of the university (Hall, 2010:3). Universities are pressed to engage in academics, teaching, and research and community engagement. Nyden raises the question of participatory research and citing Park, suggests that participatory research allows for individuals to engage and overcome difficult situations, allowing for collective and communal action (Park in Nyden, 2006:3). The Department’s call for participatory, engaged research and engagement requires an investigation of literature similar to that of Nyden and Park – identifying the relevance and current streams of thought regarding participatory scholarship.

1.4 A Historical Consideration of Engaged Scholarship in South Africa

Before considering the principles of engagement in definitional terms, we need to explore why the South African academic field has come to address the need for universities to participate actively in addressing the nation’s developmental needs. Following the end of apartheid in South Africa in 1994, the country was faced with a number of developmental trials, requiring the need for academic input and involvement in addressing the challenges of a newly democratising society. The White Paper, introduced in 1997, echoed Boyer’s description of the need for universities to “broaden the definition of scholarship beyond research to include the scholarship of teaching application, and integration” (Boyer, 1990, cited in Barker, 2004:124).

Boyer’s vision for applied academics within society was particularly relevant for higher education in a transitional society in South Africa. Transformation of education to reflect the changes in governance was essential for universities. Universities were challenged to provide new ways to resolving the development problems faced by the new government. Prior to the publication of the White Paper, community engagement was perceived as being one of the three separate “silos” of higher education – namely teaching, research and community engagement (Bender,

2008:83). Following the shift in perspective on higher education introduced by the paper, as noted previously, the need came about for community engagement to be recognised as an essential component of learning, teaching and research, giving research greater meaning and relevance in a changing atmosphere for education in South Africa. In recognition of this shift, the terminology used by national education stakeholders, including the Department of Education (DoE) and the Higher Education Quality Committee (HEQC) from the use of “community service” in the White Paper and “academically based community service” (used in the HEQC founding document published in 2001) to “community engagement”, which includes service learning (HEQC Audit Criteria in Bender, 2008: 83).

1.5 Defining the Scholarship of Engagement in South African Universities

Recognising the changes in policy redress of community engagement, universities were tasked with finding ways to incorporate engaged scholarship practices into their research and teaching outputs. The debate as to how to define engaged scholarship practices rests on how to integrate these practices into university environments. The debate also considers how to reward the work of academics in this area, including how to balance and integrate these areas with other key performance domains of teaching and research. Favish argues that the concepts of engagement are inadequately portrayed or inconsistently defined for purposes of understanding social responsiveness activities in universities (Favish in Hall, 2010:6). There is a marked need for consensus as to how to approach, define and implement programmes of engagement at a university level. The first approach to understanding the umbrella principles of community engagement would be to acknowledge the multiple definitions of engagement. There are a number of facets which community engagement can refer to, but not all of these definitions are used in an appropriate academic context. Definitional consensus is required for a consistent development of a national framework for engagement with needs of communities. This framework needs to be reflective of different institutional approaches to addressing development challenges in a country (Favish, 2010:90).

The first problem with including principles of engagement in university doctrine is how to define the goals of the “university-community engagement” effort. Universities are charged with being “responsive” to society, but in what context are universities required to respond, and to which definition of community are they required to address? (McMillan, Pollack, 2010: 2). Bearing this in mind, it is pertinent to investigate how universities in South Africa understand social responsiveness and engagement. The first approach is to understand how communities are defined. Hall defines communities as such:

“Community, then, can be taken as a cluster of households or an entire region, as an organisation ranging from a provincial government department to an NGO, as a school, clinic, hospital, church or mosque or as a part of the university itself...[Or communities can be defined as] a loosely defined set of social organisations. But community also functions as an adjective, as a qualifier that indicates work that is socially beneficial. Understood in this way and in the South African context, community work contributes to social or economic justice” (Hall, 2009: 17).

This is echoed by Fourie. As keynote speaker at the Community Engagement in Higher Education Conference (hosted in Cape Town in September 2006)², Fourie (the Rector and Vice-Chancellor of the University of the Free State in 2006) argued for a definition of community to include:

“specific, collective interest groups, constituted by their search for sustainable solutions to development challenges, that participate or could potentially participate as partners in the similarly inclined community service activities [of the UFS], contributing substantially to the mutual search for sustainable solutions to jointly identified challenges and service needs through the utilisation of the full range of assets at their disposal.” (Fourie, 2006: 1).

Both definitions of community include the notion of collective interest, social organisations or specific interest groups, who seek collective solutions to problems faced by community groups. Hall’s reference to community as a “qualifier” for socially beneficial work, and Fourie’s understanding of community as partners in community service activities identifies the communal desire for community groups to find solutions to problems relating to development in the community.

1.6 Social Engagement in South African Universities

Understanding what constitutes a community aids defining community engagement and social responsiveness. Diverse definitions of social responsiveness have been utilised as part of renewed university policy to addressing the inclusion of community engagement. Community engagement suggests actions which require responsiveness. The HEQC definition of community engagement delineates those sentiments:

“initiatives and processes through which the expertise of the institution in the areas of teaching and research are applied to address issues relevant to its community. CE typically finds expression in a variety of forms, ranging

² The Conference was hosted by the Higher Education Quality Committee of the Council on Higher Education and the Community-Higher-Education-Service Partnerships initiative of JET Education Services. This review refers to a number of papers and authors presented at the conference and will use the CHE-HEQC/JET-CHESP Conference reference to denote these publications.

from informal and relatively unstructured activities to formal and structured academic programmes addressed at particular community needs (service-learning programmes) and some projects might be conducive towards the creation of a better environment for Community Engagement and others might be directly related to teaching, learning and research (HEQC, 2004a, 19 & 26).

Engagement and responsiveness could be perceived as alternate processes, but both engagement and responsiveness require reciprocity and dialogue with communities (Bender, 2008: 84). South African universities, having developed an active approach to incorporating social responsiveness as part of academic research, have used several definitions in documents published for the benefit of this inclusion. The University of Cape Town defines social responsiveness as follows:

“Scholarly based activities that have projected and defined outcomes that match or contribute to developmental objectives or policies defined by civil society, local, provincial or national government, international agencies or industry” (UCT, 2005:4)

UCT has been instrumental in developing social responsiveness at an institutional level, through the work of the Institutional Planning Department (IPD) and the University Social Responsiveness Committee (USRC). Social responsiveness work is also evident at other South African universities, including Rhodes University, the University of South Africa, the University of Stellenbosch and the University of the Witwatersrand, to name a few (McMillan, Pollack, 2010: 4). The University of Stellenbosch has published a “Stellenbosch University Community Interaction Policy”, preferring to use the term “community interaction” to indicate community engagement as:

“the interaction between the University and communities in society. The term includes the more limited notion of service learning, while at the same time taking other service-oriented academic and non-academic community interactions into account. It also allows the University to give expression to alternative forms of social responsiveness” (Stellenbosch University, no date:2)

Service learning identifies implemented practices within university policy, which address the scholarship of engagement through university curricula and engaged scholarship activities. The Cape Peninsula University of Technology, the University of Witwatersrand and Stellenbosch University have adopted Bringle and Hatcher’s definition of service learning (also echoed in the HEQCs *Criteria for Institutional Audits*, published in 2004) as part of their university mandates for community engagement:

"Service learning is a credit-bearing, educational experience in which students participate in an organized service activity that meets identified community needs and reflects on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility." (Bringle and Hatcher, 1995 in Bender, Carvalho-Malekane, 2010:4)

The definition reflected in the HEQC document echoes this:

"Service learning is applied learning which is directed at specific community needs and is integrated into an academic programme and curriculum. It could be credit-bearing and assessed, and may or may not take place in a work environment." (CHE, 2004:26)

Community engagement, what a community is defined as and what the practices should be to include the service learning approach in university curricula is clearly defined by many South African university policies. This is reflected in each different university mandate for community engagement. Despite variances in definitions and understandings of engagement, the majority of South African universities have considered community interaction as integral to university policy. Universities are thus tasked with finding how to effectively implement service learning and engaged scholarship as part of research and teaching outputs. Bender describes the complexities of this process, because community interaction is sometimes viewed as being an "added extra", or something which is pleasant to consider for community benefit, but does not have a steadfast place as a key component of academic output (Bender, 2008:83).

Considering the amount of work undertaken to institute principles of community engagement within South African universities, the process of interaction is still considered to be problematic, because of the gaps which exist in concretising what is actually required for universities to implement engagement or interaction in institutional policies. The perspective of interaction as an extra-curricular activity to research and teaching problematizes the definition of engagement to an extent. The scholarship of engagement looks at an academic approach to including service activities, without any practical ramifications or visible outputs from service learning. When considering community engagement, the proposed definitions indicate a level of interaction between universities and communities, but there is a sense that this interaction is not by any means urgent or requisite for societies. Current literature suggests that the evolution of engagement would necessitate a more radical move for university involvement. Considering the number of available community engagement projects in South Africa, it is difficult to describe each and every university's programme. The following section will provide a snapshot analysis of four university programmes that outline community engagement project mandates and policies.

1.7 Current Examples of Engagement in South African Universities

The following examples reflect a small percentage of engagement programmes nation-wide. The motivation for choosing these as snapshot examples was due to the unique approach of each university in establishing a core mandate for engagement, pertinent to their environments. The University of Stellenbosch, the University of South Africa and Rhodes University provide interesting comparative approaches to that of the University of Cape Town. Considering the analysis of the science shop approach implemented at UCT, these comparative examples reflect on engagement in other university programmes.

1.7.1 *The University of Stellenbosch*

Community interaction initiatives at Stellenbosch University were headed up in 2004 by the Strategic Task Group for Community Service, under the leadership of Professor Julian Smith and Mr Kobus Visagie (Stellenbosch University, 2004: 2). The group designed a policy and implementation plan for community service at Stellenbosch, later renamed community interaction. The community interaction platforms included academic departments, non-profit organisations belonging to the university, support service departments and student structures (Stellenbosch University, 2004: 2).

The renewed focus on knowledge production within the university was re-envisaged in the renewed Community Interaction Policy in 2008, to emphasise the responsibilities of the university to the communities – teaching and research must be advantageous to communities, with reciprocal benefit for the university (Stellenbosch University, 2004: 3). The Community Interaction model places emphasis on community partnerships and social responsiveness (Stellenbosch University, 2008:2). Models employed by Stellenbosch and UCT will be examined as part of the brokering model approach to social responsiveness, to come later in this report.

1.7.2 UNISA

UNISA, described as a distance learning institution, is faced with a different way of engaging students and academics with community projects, considering the amount of distance learning students enrolled at the university. The community engagement is explained as having primary objectives to *“cater for the needs of [our] broad communities, to be social-responsive, share wisdom, provide support and collaborate with these communities to...ensure that these communities are integrated in overall teaching and research activities...”* (UNISA, 2011: 1).

This commitment to engagement was developed into a Community Engagement and Outreach Policy in 2008, providing a framework for community work, as part of UNISA’s 2015 Agenda

for Transformation (UNISA, 2008: 3). This policy is also reflective of UNISA's Strategic Plan for 2015, which outlines the objective for the university to "*utilise the resources and capacities of the University in community development initiatives, and collaborative partnerships*" (UNISA, 2008: 3). The university has committed to including curriculum based community engagement for teaching, learning and research at UNISA. There are already a number of projects which the university has committed to, but the policy provides a means to concretising this involvement with the community.

1.7.3 Rhodes University

Community engagement at Rhodes University is headed up by the Rhodes University Community Engagement Unit (RUCE). Community engagement initiatives previously formed part of the Centre for Social Development. RUCE was borne out of the expanding need to address community initiatives at Rhodes. The community engagement directorate is mandated to achieve the following:

"to promote a reciprocal process of knowledge construction and dissemination, develop and channel the civic and social responsibility of all students, student organisations and staff of Rhodes University through various community engagement activities". (Tiwise, 2010: 1).

As yet, there is only one report published which details initiatives undertaken by the RUCE, dated 2007/8. The report indicates that engagement practices have been ongoing at Rhodes University since 2005 and the products of these practices have included a community engagement policy, a Community Engagement Award and the inclusion of community engagement as part of two faculties in "*size and shape planning*" (Andersen, 2008:1). Information provided by the report gives a clear outlook as to how policies and engagement efforts are slowly taking shape in the university. As with all the universities discussed, the available information indicates the growing success of formalised engagement throughout the South African academic field.

1.8 Comparative Engagement at the University Of Cape Town

Social responsiveness at UCT has been documented according to current initiatives which match the definition of responsiveness proposed by the university. In 2003 and 2004, a campus initiative was developed to investigate the ways in which UCT was getting involved in community projects. A term was adopted to indicate work of this nature, with the formal publication of the definition of social responsiveness in 2006, as adopted by the UCT Senate.

This definition specifies that social responsiveness must have *“intentional public purpose or benefit (which) demonstrates engagement with external (non-academic) constituencies”* (UCT, 2008: 2).

Following this, the formation of the Social Responsiveness Working Group (which later became recognised as the University Social Responsiveness Committee), led to the creation and formalisation of the university’s Social Responsiveness Policy in November 2008 (McMillan, Pollack, 2010: 4). The document serves as a guide for social responsiveness for teaching, learning, research and community service (McMillan, Pollack, 2010: 4). Each of the initiatives for social responsiveness at UCT have been documented and added as part of the SR website. Community initiatives range broadly from health projects, to scholarships for previously disadvantaged students to sector specific research projects, aimed at enhancing available knowledge for particular causes (UCT SR website, 2011).

Considering the efforts undertaken by South African universities to extend engagement programmes as part of academic researching and teaching, we have a clearer idea of how these programmes operate. The choice of Rhodes, UNISA, Stellenbosch and UCT as snapshots of engagement at universities is motivated by each universities unique approach to engagement. There are a great number of other examples at other South African universities, but these four provide a comprehensive look at current initiatives. The model upon which these initiatives is based, particularly in terms of the UCT Knowledge Co-op Pilot project, can be identified as the “brokering” model, because of the work arranged or brokered between the university and the community. The brokering model relates to the Science Shop model used by other universities globally.

Functioning mechanisms for engagement have a long path of development. In South African universities, these advances have taken place in recent years, following the publication of the 1997 White Paper. Engagement is manifest in a variety of forms. To fully understand the available models of engagement, most pertinently the Science Shop model, we need to investigate the theory of brokering, which relates to the development of interactive spaces across which universities and communities engage. Chapter 2 investigates the brokering model and the notion of transactional space, which further defines how universities and communities interact, particularly in a science shop format

CHAPTER 2 – THE BROKERING MODEL: PRACTICAL IMPLEMENTATION OF COMMUNITY ENGAGEMENT

Research indicates that building partnerships between universities and communities requires interaction between the two in “transactional spaces”, as they occur in a knowledge partnership (Gibbons, 2005, PG?). University-community interaction relates on three key areas, firstly the nature of the “interface”, the “boundary infrastructure” or the “transaction zone” in the knowledge partnership, secondly the tools of mediation required for use and thirdly, the role of brokers or boundary workers (McMillan, 2009: 2). This theoretical framework provides key insight into how communities and universities interact to create meaningful research and partnerships for the future. The following section investigates a number of sources which engage with the notion of transactional spaces, brokering and social learning systems. By understanding how the brokering model works, how it can open access for community organisations to the university and provide guidelines for partnerships in the future, we will have the relevant research tools for continual evaluation of the model as it is implemented practically in the future (NRF proposal, 2010, PG?).

2.1 The Brokering Model

2.1.1 Boundary Zones/Transaction Spaces

University-community interaction occurs across a boundary between two spheres. A boundary exists between universities and communities. The work accomplished by universities and communities can be done separately, without universities and communities engaging. A situation may arise that necessitates engagement between universities and communities. This requires interaction between the two entities where “boundary crossing” occurs. The boundary zone or the transaction space refers to the point of engagement between universities and communities (McMillan, 2009: 2). Gibbons refers to the work accomplished across transaction spaces as follows:

“The notion of a transaction space shifts the metaphor from the translation across boundaries to dialogue at boundaries” (Gibbons, 2005:11)

This implies that interacting spheres, namely universities and communities engage at transaction spaces or boundary zones, to “dialogue at boundaries”, or interact at boundaries with the intention of creating meaningful work between the two spheres. Gibbons explains this interaction between university and community as a social contract between the two entities,

suggesting that the relationship between higher education bodies and society needs to be re-imagined (Gibbons, 2006:1). Wenger furthers this notion by suggesting that knowledge in itself is a participatory action in multifaceted “social learning systems” (Wenger, 2007: 226). Wenger’s research looks at how organisations, such as university bodies and community organisations are dependent on social learning systems, which are characterised by three elements, namely communities of practice, boundary processes and identities (Wenger, 2007: 226). Continuing with this idea of social learning systems and boundary interaction, Gibbons further explains boundary processes by suggesting that:

“Boundary work needs to be facilitated and managed and to do this specific knowledge and skills are required...engagement as a core value will be evident in the extent to which universities do actually develop the skills, create the organisational forms and manage tensions that will inevitably arise when different social worlds interact. [T]o embrace this form of engagement entails that universities themselves be prepared to participate in those potential transaction spaces in which complex problems and issues will be initially and tentatively broached (Gibbons, 2005: 11-12).

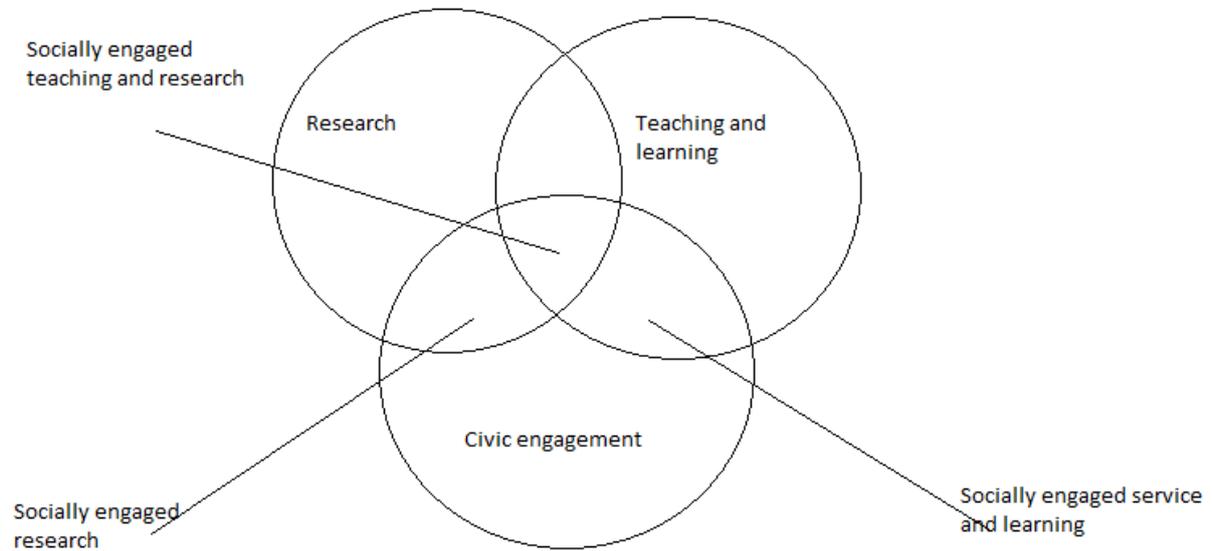
Work accomplished across boundaries thus needs to engage specific skills for specific organisations and interactions connected by different social environments or interacting spheres (in our case, universities and communities). In order to achieve this, universities need to be willing to function across transaction spaces to address problems encountered by communities, to be willing to assist in finding solutions.

2.1.2 University-Community Boundaries

Gibbons explains that the terms of the social contract between universities and communities determine the kind of interaction between universities and communities. This also determines the extent of this interaction. (Gibbons, 2006: 1). If the basis of understanding about interaction between universities and communities and the relationship between communities and universities differs, the nature and types of engagement also changes. This has the potential to result in miscommunication and misdirection in projects between the two entities. To avoid this happening, the nature of interaction needs to be defined. This introduces the notion of brokering, specifically in terms of brokering a partnership between universities and communities.

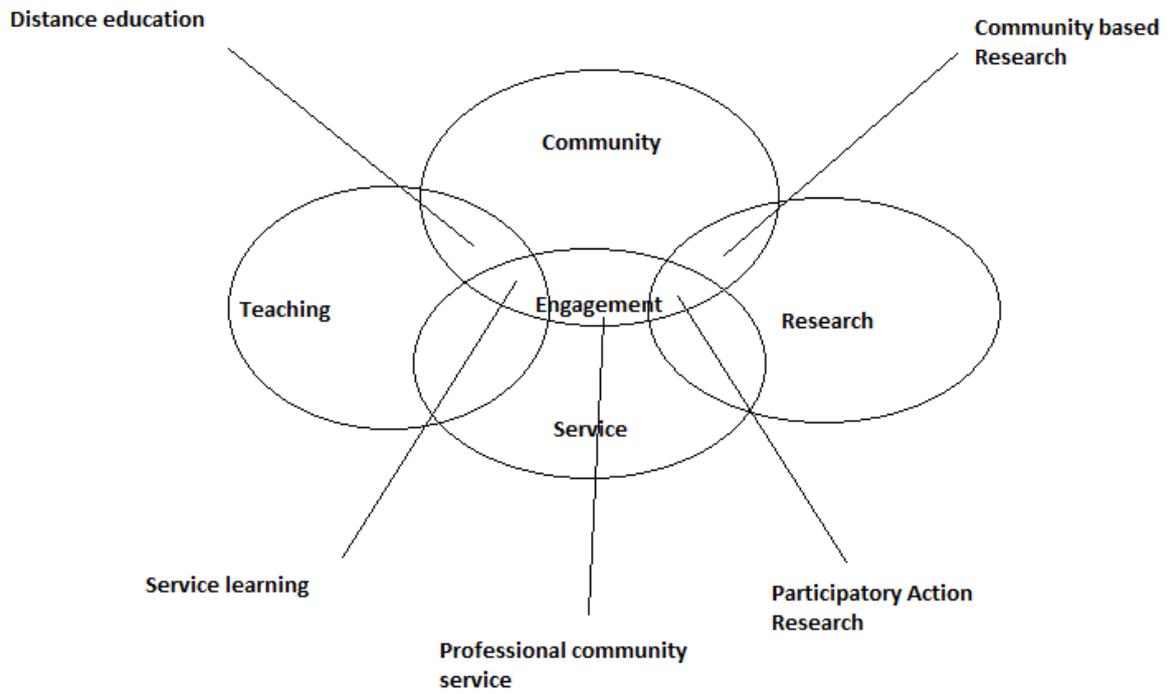
2.1.3 Brokering

FIGURE 1 - GRAPHIC REPRESENTATION OF BROKERING



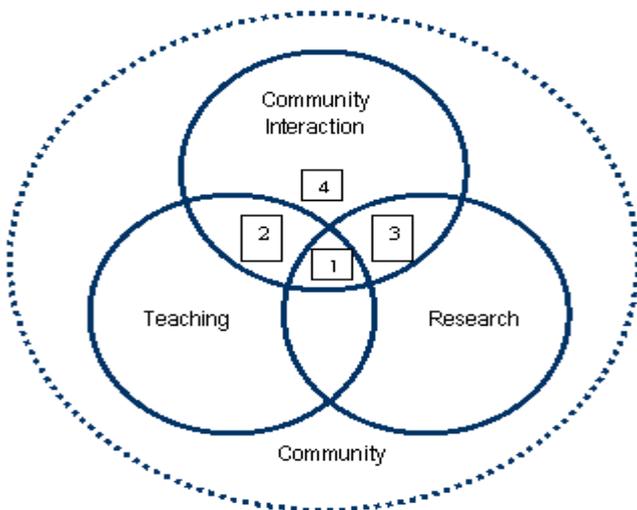
Source: UCT Social Responsiveness Policy Framework, 2008:3

FIGURE 2 – COMMUNITY ENGAGEMENT MODEL



Source: Lazarus et al, 2008:61

FIGURE 3 – STELLENBOSCH UNIVERSITY INTERACTION MODEL



Source: Stellenbosch University Community Interaction Model, 2011:1

Implicit in the notion of brokering is the idea of the social contract introduced by Gibbons (2006:1). To broker a partnership means to make use of an agent or organisation to negotiate, plan or organise transactions for the benefit of another party. For universities and communities to engage in a social contract to develop solutions to problems, the university body acts as a broker for the community partner, to act as an intermediary resource capable of resolving a problem brought to the university by the organisation. This relates to the process of experiential learning, for the university partner. Students learn by gaining practical experience – both entities benefit from the relationship, as the university gains additional knowledge and resources for further projects (McMillan, 2009:2). McMillan draws on the work of Lave, Wenger and Moore (Lave, Wenger, 1991, Moore, 2000) to explain how students are able to benefit from a brokering partnership. However, further investigation as to the benefits of brokering is required, because there is little information relating to “how experiential learning happens in the context of real-world activities, or about how well the learning goes” (Moore, 2000 in McMillan, 2009:3).

The brokering model itself identifies the interaction between universities and communities, which meet at transaction zones to disseminate information and provide assistance for both community projects and further experiential learning.

Figure 1 provides a figurative analysis of brokering in a university environment. The interacting spheres represent the three areas of university activity, namely research, teaching and learning and civic engagement. The transaction space is shown by the interlinking of the three circles, determining when and how a university participates in civic engagement, and how research, teaching and learning is used to facilitate this engagement. A partnership is brokered between the three spheres of engagement, research, teaching and learning (UCT, 2008:3).

Similarly, the model used by Lazarus et al (Figure 2) also illustrates the brokering relationship between community, research, teaching and service. Both models are similar in that they represent the connection between university activities (research, teaching and learning) and engagement. Figure 2 uses service as a key component of brokering, representing the notion of professional community service, in addition to academic activity and civic engagement. Partnerships are brokered across these transaction spaces, to ensure maximum benefit for the relationships formed between university and community partnerships. Figure 2 includes service as a fundamental component of a brokered partnership between university and community. Community-based research, distance education, service-learning and participatory action research

are also included as integral components of the model, indicating the importance of these facets for the brokering model.

Figure 3 gives an alternate depiction of the 4 spheres of interaction between communities, teaching and research, as outlined in the Stellenbosch University model for community interaction (Stellenbosch University, 2011:1). This is identified according to 4 types – the first type refers to the integration of teaching, learning, and research and community interaction. The second type refers to the integration of teaching, learning and community interaction. The third type refers to the integration of research and community interaction, and the fourth type refers to volunteerism and public service. These spheres represent the partnerships brokered between the university and the community and shows how their interaction is connected across various fields (Stellenbosch University, 2011:1).

CHAPTER 3 – SCIENCE SHOPS AND THE BROKERING MODEL

3.1 The European Example – Science Shops

Having assessed the theoretical explanation of the brokering model, boundary zones and transaction spaces, it is essential to understand how this model works practically, in this case using the science shop as an explanatory medium. The Science Shop model is the clearest indicator of the brokering model for university-community interaction. The following chapter explores literature pertaining to science shops, the origins of science shops and various examples of science shops across the world. This provides the basis for the explanation of the UCT Knowledge Co-op Pilot, which is based on the science shop model and the brokering model.

Active community engagement in South Africa has strong ties with the development of science shops in the European Union. South Africa is as yet discovering ways to formalise practical implementation of community engagement within universities. The European Science Shop model is one of the oldest examples of modern community engagement in the 20th century and its practice has spread from Europe to the United States and Australia amongst other countries (Leydesdorff, Ward, 2005: 354).

3.1.1 Origins of Science Shops – Theory and Development

The science shop model was developed and introduced in the Netherlands in the 1970s. The ideological origins of science shops can be found in the roots of the political movements of the 1960s – the political outlook during the time called for social reform and political liberalism, in this case in the Netherlands in particular (Fischer, Leydesdorff, Schophaus, 2004: 199). Students and staff of universities called for “democratisation” of universities – this can be understood as the desire for universities to provide equally for staff, students and society (as opposed to the ivory tower description of the university) (Gnaiger, Martin, 2001: 8). The idea of the science shop was to create a bridge between academic science (science used in its most comprehensive sense, including social science, the humanities and natural science) and organisations who were unable to afford funding for their own research (Fischer, Leydesdorff, Schophaus, 2004: 199).

Science shops are described by the SCIPAS³ project as giving “*independent, participatory research support in response to concerns experienced by civil society*” (Gnaiger, Martin, 2001:6). Science shops offer citizens, NGOs, municipalities and at times small and medium enterprises a channel to accessing scientific and technological information, research and skills assistance. Leydesdorff and Ward describe this relationship between science shops and communities (in this sense community would include citizens, NGOs, local government and enterprises as beneficiaries of science shop knowledge) as the relationship between “*knowledge-producing institutions and citizen groups needing answers to questions*” (Leydesdorff, Ward, 2005: 354). Science shops are typically “staffed” by independent shop staff, university staff, students and researchers (voluntary and paid researchers). The research is primarily participatory, with continual dialogue and discussion held between researchers and the individual or groups seeking assistance (Gnaiger, Martin, 2001:6). Results obtained from research undertaken can then be used by the organisations or disseminated amongst other groups, facilitated by the science shop.

3.1.2 Science Shop Model

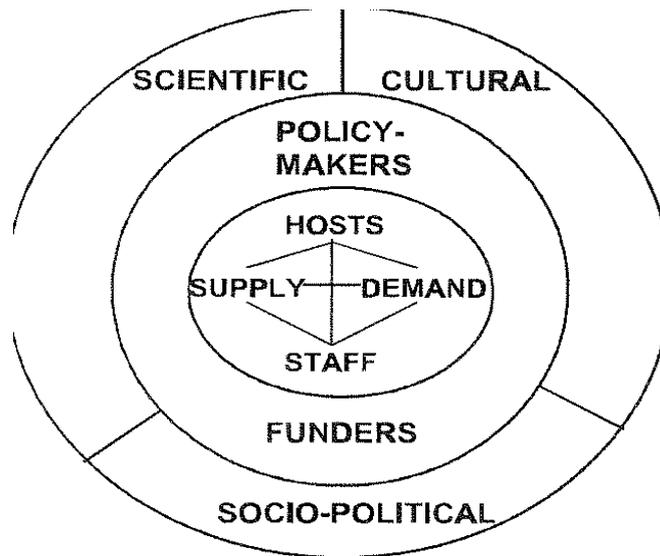
The description of a science shop as being an interactive body with staff members employed to assist in disseminating knowledge and skills production for communities gives an idea of how science shops operate. It must be noted, however, that there is no singular, prevailing organisational structure making up a science shop – organisation and operation of science shops is dependent on which context they operate within (Gnaiger, Martin, 2001: 9). The first SCIPAS report provides the following criteria for operation of the science shop, upon which the model is based:

Science shops seek to provide knowledge and affordable skills and services through the mediums of research and education, with the intention of promoting public access to science and technology. This is undertaken to enhance cooperation and understanding between creators of policy, education and research bodies and civil society, to ensure that the needs of civil society are being addressed (Gnaiger, Martin, 2001: 9).

³ SCIPAS refers to the Study and Conference on Improving Public Access to Science through science shops. The reports are published by the Living Knowledge International Science Shop network (Gnaiger, Martin, 2001).

According to the INTERACTS⁴ report, the majority of science shops can be found within university departments, and are administrated by “scientific co-ordinators” who are positioned as intermediaries between the community or citizen group consulting for advice, and the relevant students who are assisting with or executing the research. Certain shops are based in communities and also function as non-profit organisations (Jorgensen et al, 2004: 3).

FIGURE 4 – SCIENCE SHOP MODEL (SCIPAS REPORT 2)



The survival of a science shop is dependent on active engagement with four relevant participants. These “actors” include clients, scientists, institutions and science shop staff. The client represents the “societal demand for research support”, scientists provide resources for research support (including students and researchers), and the relevant institutions are identified as host structures, including universities as predominant institutional support. Staff members at science shops are described as “individuals enacting the science shop philosophy” (Mulder et al, 2001:6).

The model clearly outlines the interaction of staff, clients, host institutions and resources, within differing socio-political, scientific and cultural surrounds. Clients are situated at the centre of the model, showing the interaction between staff and host institutions that are tasked with addressing client demands. Funders and policy makers form an outer circle as they play a role in

⁴ INTERACTS refers to the research consortium “Improving Interaction between NGO’s, Universities and Science Shops: Experiences and Expectations”. Research is conducted and contributed by a number of collaborative authors, including Jorgensen, Leydesdorff, Gnaiger and Hall, amongst others (INTERACTS, 2004).

managing the demands of the science shops and formulating policy accordingly. Each facet is influenced by differing contexts, as client demands are shaped by socio-political cultural and scientific changes in surrounding environments (Mulder et al, 2001:6).

3.1.3 The Science Shop Trajectory in Europe

The trajectory of science shops saw a number of developments in four successive waves, from the 1970s until present. The first science shop was developed in 1973, at the faculty of chemistry in Utrecht in the Netherlands, followed by the University of Amsterdam in 1978. The shops were created to provide services for communities, with the added intention of advancing policy in collaboration with NGOs. These initiatives were supported by the Dutch Federation of Trade Unions, on condition that the Federation was represented within the science shop and its meetings (Leydesdorff, Fischer, Schophaus, 2004:200). This presents the first example of university collaborative efforts with external communities, including trade unions and NGOs.

The second wave of development for science shops occurred in the 1980s in Germany, France, Denmark and Belgium. The second movement of shops in these countries formed part of citizen initiatives (in Germany) to engage with academic support mechanisms for problem-solving, particularly in the environmental sciences (because of the burgeoning environmental movements of the time). Universities and science shops would collaborate to engage with environmental issues, to try and find workable solutions to energy and pollution crises (Leydesdorff, Fischer, Schophaus, 2004:200). The 1980s saw a rise and consequent decline of science shops towards the early 1990s because of a number of challenges posed by the changing socio-political environment, following the end of the Cold War.

The 1990s ushered in what the SCIPAS report depicts as the “commercialisation of higher education and research, decreasing democracy at universities, and tighter study-schedules for students” (Mulder et al, 2001: 7). Faced with funding difficulties and reinvigorated focus on academic excellence, it became difficult for certain universities to maintain a solid, consistent connection with the wider communities. Despite this, the science shop model began to spread beyond Europe, to include Central and Eastern Europe, Israel, the United States, the United Kingdom and Australia.

This kind of model appeared in South Africa in 1995 in the form of the Science Advice Unit at UCT in 1995. The Unit operated independently of science-shop developments in Europe, but functioned along similar lines to the science shops of the time. It was started as a research initiative by the founder and dedicated itself to soliciting client groups, to increase environmental

awareness and to find research areas and collaborative efforts. The Unit was closed in 1998 due to a lack of funding, but research initiatives to find working formulae for community interaction continued, because of the need to find a link between civic engagement initiatives and university activity. The science shop model in Europe was distant from community engagement efforts in South Africa, but the principles remained similar and operations to engage citizen groups bore relevance to both continents (Mulder et al, 2001:10).

Leydesdorff depicts the decline of the science shop as a policy instrument, because of a move towards academic entrepreneurship, privatisation and commercialisation – a renewed focus on financial output within academia negates the need for community interaction (Leydesdorff, Fischer, Schophaus, 2004:200). Wachelder describes the decline in science shop activity as being a direct result of large financial cutbacks, as well as continuous political change and renewed pressure on students, academics and staff to meet research output deadlines. (Wachhelder, 2003:246). Despite this, there are still a number of active science shops in Europe and their activities provide continued relevance to community engagement models worldwide.

3.1.4 Science Shops Today

Science shops in the 21st century vary in number, composition and approach. Because of increased pressure to find funding, according to Leydesdorff there has been a marked decline in science shop activity since the late 1990s, but a large number of science shops still exist worldwide. Certain institutions no longer use the term “science shop”, because of renewed and varied approaches to university-community interaction. An example of this are “project agencies” in Denmark, “co-operation offices” in Germany, and “community exchange” initiatives in the UK (Leydesdorff, Fischer, Schophaus, 2004:200). This change in terminology is often reflective of a change in interaction policies between citizen groups, NGOs and universities. Despite this, the science shop model is under continual analysis, and both the INTERACTS AND SCIPAS reports provide interesting insight into how these projects function currently.

3.2 The Science Shop Initiative in Australia, Canada and USA

The movement of science shops from Europe to other parts of the world is documented by the SCIPAS project, detailing how the science shop has developed outside of Europe. The science shop model in Australia is based on the Dutch model. The first science shop was established in Canberra from 1988 to 1990, under the jurisdiction of Wisenet (Women in Science Enquiry Network) and then the Australian National University. The shop functioned according to the

“mediation model”, but the main difference between the European model and the Australian model was that the Wisenet Science Shop was not incorporated as part of the university. The shop functioned outside of university legislation, but the comment is made that the shop may have gained greater respect and recognition if it was affiliated with the university (Mulder et al, 2001: 58). When the shop was combined with university activities, funding for the work decreased, and all efforts were made to raise financial backing for the Wisenet shop. Efforts to secure funding failed, because the science shop was identified as an independent organisation, despite being included as part of the university (Mulder et al, 2001: 58). The Australian example of the science shop in the late 1980s gives insight into the continual difficulties currently experienced by science shops, because of the lack of clarity about the position of these institutions in academic environments. The question remains as to what value these shops can provide for communities and universities, without being viewed as an additional initiative to the functioning of the university.

A secondary issue for the Wisenet shop was the fact that being associated with Wisenet created assumptions that the shop activity was for women only. The term “science shop” was also problematic in that the understanding of “science” activities was purely associated with science in its direct form (physical and chemical branches of science). The use of the word “shop” also created confusion, as it was assumed that the organisation was charging fees for services rendered, as opposed to merely engaging with communities to resolve issues relating to development, within the broader scope of academic sciences (Mulder et al, 2001: 68). Bammer et al describe the Wisenet shop as being the “right” idea, implemented at the wrong time – commending the creation of the shop as indicative of enthusiasm to create service learning channels for universities and communities (Bammer et al, 1992:300). Another example of a successfully engaged Science Shop model was the creation of the “Shopfront” at the Technical University in Sydney. The success of Shopfront was attributed to the fact that community engagement activities form part of academic activities, and do not function separately or in addition to academic research. Projects conducted by Shopfront are directly linked to student coursework, whereby students acquire subject credits for work supervised by academics – creating the connection between academic content and community initiatives (Mulder et al, 2001: 60).

The Wisenet model opened up further opportunities for community engagement initiatives. The formation of the Australian Universities Community Engagement Alliance (AUCEA) represents a network of committed individuals to university-community engagement in Australia – building

on the work of the science shop, but creating a broader spectrum for engagement initiatives (AUCEA, 2011:1). AUCEA's mandate is to:

“lead and facilitate the development of best practice University-Community Engagement in Australia.”
(AUCEA, 2011:1)

The creation of a network for community engagement in Australia relates directly to the SCIPAS report's recommendations for furthering engagement activity (with the science shop as the dominant model). Similar developments in Canada for engagement activities were established under the auspices of the Community-University Research Alliances (CURAs) and also used the Dutch science shop model as a base for their own initiatives. To garner information for the Canadian model, research was undertaken in the Netherlands by a group of researchers from the Canadian Social Sciences and Humanities Federation, leading to the consequent development of the CURA project (under the helm of the Social Sciences and Humanities Research Council of Canada [SSHRC] (Mulder et al, 2001: 63). The project was a pioneer for the SSHRC in that it was the first efforts made to subsidise researchers who were not based at a university. Other examples mentioned in the SCIPAS report outside of Europe include South Korea and Malaysia (Mulder et al, 2001: 64).

3.3 Community Based Research in the United States

Community engagement in the United States functions differently to the European science shop model. The term for engagement is Community Based Research and is defined as:

“research that is conducted by, with or for communities” (Gnaiger, Martin, 2001: 53).

Community based research (CBR) centres are predominantly situated at universities, with the remainder operating as independent non-profit organisations. The links between science shops and CBR centres are comparative in that CBR centres aim to create responsive science, research and technology programmes which address “democratically decided social and environmental concerns”, allowing for citizen and community group involvement in key research, science and technology decisions and outputs (Gnaiger, Martin, 2001:54). Communities are cited as having the power to change research outcomes, allowing individuals and groups to be part of research which affects the community directly, or even indirectly. CBR is facilitated by the Community Research Network (CRN – launched by the Loka Institute), which allows for coordination between research centres and facilitates the production of efficient research (Sclove et al, 1998: v).

The key differences between the American system and European, or Dutch science shop model is, according to Sclove, that CBR centres in the US are far fewer in number than the Dutch science shops and are comparatively difficult to access by the general populace who would benefit the most from these centres. The Dutch science shop network is described as a “comprehensive community research system that can address questions on virtually any topic for any group” or individuals who form part of Dutch civil society (Sclove et al, 1998: vi). Problems for furthering research also include funding, but it appears that this is a predominant problem for all community associated work. Policy shifts and engendering of community networks may advance understanding of the need to integrate community action and university research, but this is a continual work in progress.

Having gained insight into how the science shop model has developed and spread, the next step is to examine some of the evaluations achieved of science shop initiatives. Considering the evaluative nature of this review, gaining insight into other evaluations of the work of science shops and engagement will assist in laying further groundwork for an evaluation of a South African science shop initiative. As yet, there are no concrete evaluations of science shop initiatives in South Africa. The following section will briefly review international science shop initiatives and are mostly post-hoc evaluations or retrospective evaluations. The NRF study will be a formative evaluation designed to capture evaluation data from the beginning phases of the UCT pilot project and will help define the terms of engagement or terms of interactions that are deemed most appropriate in the UCT Science Shop configuration

CHAPTER 4 – EVALUATION OF SCIENCE SHOP INITIATIVES

4.1 An evaluation of science shop efforts to democratise science and technology

The science shop movement has made significant in-roads into how knowledge production functions between universities and communities. Science shop projects have the capacity to produce relevant research for university analysis but can also create working opportunities for communities to solve developmental problems.

A number of academic inquests into the benefits of the science shop and evaluations provide different perspectives as to whether science shop initiatives are successful in their initial goals. The first paper reviewed was completed by Katharina Schlierf. Her thesis analyses whether or not science shops have successfully contributed to the “democratisation of science and technology” (Schlierf, 2010:1). By creating a framework to evaluate the work of the science shop, Schlierf establishes a working investigation as to whether science shops do fulfil their originally intended goals and outcomes – namely to democratise science in its broadest sense. The idea of democratising science reflects on the aim to make academic sciences accessible to the broader community outside of the university (Wachhelder, 2003:244). Democracy in terms of knowledge production refers to community involvement and participation in science and technology.

Schlierf questions the democratic quality of science shops, suggesting that this quality is monitored by the degree or quality of participation in science shop initiatives. Democratic representation can be defined in terms of participation by universities and communities. Increased participation in science shop initiatives results in an enhanced sense of democracy and democratic representation of both communities and universities (Schlierf, 2010: 25). For democratisation of knowledge production to be successful, there is a definite need for interaction on behalf of both communities and universities. Schlierf draws on the work of Irwin and Douglas who question whether the gap between research institutions and communities can be bridged. This gap can be attributed to different foci of knowledge production and absorption – communities are responsible for engaging in communal activities, whereas universities tend to focus on individual pursuits for the creation of new knowledge (Irwin, 1995, Douglas, 2005 in Schlierf, 2010: 25). Not all projects garner the same amount of response – certain projects may gain more financial support than others, because of the nature of the effect the project may have for the community or environment. Some projects may also gain consistent funding because of invested university interests, whereas others may gain initial support but this support may decline over time due to a lack of funding.

4.2 Contribution To Curricula –How Can Science Shops Transform Knowledge Production?

Developed science shops are beneficial to furthering potential curriculum development at universities. This is critical for an evaluation of the benefits of the science shop, considering the perspective that science shops do not add value to university research capacities. Fokkink and Mulder describe the role of the science shop in advancing new academic programmes (Fokkink, Mulder, 2004:549). One of the most important aspects of learning that the science shop provides is being able to transform higher education practices, to enable students to gain new forms of knowledge and make use of it in broader societal contexts (Fokkink, Mulder, 2004: 549). This enables thought for how students can use these skills in the future, considering the role they play within their own communities and academic communities. Science shops offer a means to combining community and university activity within university curricula (Fokkink, Mulder, 2004: 549).

Including science shop activity into university curricula is essential for monitoring and evaluation of science shop initiatives. By continually processing and monitoring science shop activity, we gain an effective way of seeing how science shop initiatives influence university activity. The ways of including science shop activity into university curricula include using science shop case studies as practical examples for courses, using science shop experiences as part of methodological courses and as part of teaching components which focus on the role of science in society (Fokkink, Mulder, 2004: 549). Acceptance of the science shop into academic thought is a significant step for universities, communities and civil society initiatives, because of how all entities benefit – in the short term based on the results of individual projects and in the long term according to how students can apply their knowledge in societal contexts (Fokkink, Mulder, 2004: 549).

4.3 The Relevance of Science Shops for the Current South African Market

Farkas highlights the fact that the concept of engaged scholarship is not a new idea, but has been recently challenged by the need for greater knowledge production in a globalising society (Farkas, 2002: 203). Engaged universities provide a service to communities. This has become increasingly relevant for South Africa, as the country continues to resolve backlogs of problems within communities. Farkas integrates an evaluation of community-based participatory research into her analysis of science shops, a practice which also applies to the South African context, because a lot of interaction occurs as a result of community-based participatory research (Farkas, 2002:204). The primary problem identified regarding the science shop is the inconsistency of

funding and uncertainty of shop survival for projects. This is perhaps more problematic for South African communities in that community projects would need to be continually sustained and the threat of a lack of funding would prove to be damaging for any sustained efforts.

4.4 A Way Forward for the Knowledge Partnership Pilot

Available literature which evaluates science shop projects is somewhat limited in that there is not much to report or reflect on. Evaluation is often based on case studies and is thus limited across the board in terms of science shop analysis. The importance of evaluation is to enable us to examine whether the UCT science shop initiative is able to improve the structure and nature of engagement between universities and communities.

The Knowledge Partnership Pilot provides a primary example of a South African science shop, designed to act as a broker for South African communities and the University of Cape Town. Based on the assessments and evaluations provided as to whether science shops do play a relevant role in university activity, we can see that the role of the KPP will prove to be of utmost importance over the next months and years, because it acts as a willing broker between societies and the university – again, both community and university benefits from the reciprocal relationships established for problem-solving and curriculum based activity.

The NRF evaluation study aims to provide further insight into whether the UCT pilot project will bear fruit, by identifying its key objectives and whether these are successful. The literature review reflects on this as a primary deliverable for this project.

CHAPTER 5 – THE UCT KNOWLEDGE PARTNERSHIP PILOT

5.1 The Knowledge Partnership Pilot

The proposal for a pilot for a UCT based science shop, which would engage the principles of brokering and emulate the science shop model created in the Netherlands, was forwarded following a bid by the UCT Vice-Chancellors Strategic Fund in 2009, allowing the creation of a science shop style initiative, the UCT Knowledge Partnership (IPD, 2010: 2). The purpose of the Knowledge Partnership, as stated by the UCT Institutional Planning Department is:

“to offer community groups easy access to the skills base of the university...acting as an avenue for external constituencies to access the knowledge, skills, resources and professional expertise within the university around problems they experience...it also provides a framework for research and student training and learning that is grounded in an engagement with society. (IPD, 2010: 2)

Having raised the question of interaction in the science shop model, and the necessity of bridging university-community interaction in teaching, learning, research and engagement spheres of activity, the Knowledge Partnership represents a culmination of these efforts at UCT to develop a science shop initiative.

5.2 The Pilot Model

Project manager Barbara Schmid outlines the work of the pilot as follows:

“The UCT Knowledge Co-op will mediate between the community partner and appropriate staff and students in the university to jointly develop a project. Students – who will be supervised by academic staff – or staff members themselves, may take on the projects to conduct research or give practical support to community groups. In each case the work they do will fit the needs of the community partner as well as those of the university – and will deliver a product to both”. (Schmid, 2011:1)

As an intermediary body, the partnership acts as a liaison between community partners, staff and students to work together on projects, conducting research, finding practical solutions or offering support for community projects. This benefits both the relevant community body and the university. This emulates the brokering model, in that university and community interact across boundaries to provide mutual support for each entity. Research is assigned to students as projects facilitated by academic supervisors (which can be included as part of Honours, Masters

or Doctoral research), and findings from each project can be used for further case study analysis. This can include service learning and “experiential training initiatives” (Schmid, 2011:1). One of the goals is to generate a report for use by the client and the student (who in turn can use report findings for academic qualifications. The model is beneficial to staff members as well, providing a structure and background for further research, student interaction, training and learning which is associated with societal engagement (Schmid, 2011:1).

5.3 Aims and Objectives of the Project

The pilot project aims to create a sustainable institution for communities to approach if in need of problem solving or support. The two year pilot period will focus on the following: creating publicity for the project in Cape Town and the Western Cape, by establishing a website, and encouraging participation within the university and broader community. This will facilitate the brokering of new partnerships where there is a need within “external constituencies” or within relevant academic fields (UCT, 2010:1). The objectives also include the creation of “quality assurance and ethical procedures” to facilitate stakeholders in the project and also to safeguard academic standards. This will result in the creation of a “database of good practice”, which will be related to socially engaged research and the outcomes of service learning. An advisory structure will also be set up, with the presence of external representatives and an internal committee which will assist with pilot department contributions (UCT, 2010:1).

CHAPTER 6 – CONCLUSION

The evaluation of knowledge production in an international and local context yields insight into the large amount of available literature which addresses social engagement, responsiveness and the development of the science shop. The preceding review has assessed four areas of content, namely the scholarship of engagement, the brokering model, the development of the science shop and the development of the UCT Knowledge Partnership Pilot.

Chapter 1 provided a broad look at the definitions of the scholarship of engagement, community engagement, social responsiveness, service learning and a snapshot perspective of some of the available social responsiveness projects currently in place at South African universities. The available literature indicates that, although there is a lot of current awareness about social responsiveness, the practices of engaged scholarship and community engagement need to become more entrenched into university curricula. This needs to be accomplished for universities and communities to recognise the necessity of integrating research, teaching, learning and civic engagement.

Following on from the discussion of entrenched civic engagement in universities, Chapter 2 identified some of the available models of engagement, primarily the brokering model. This was achieved in relation to a discussion about boundary zones between universities and communities. The brokering model identifies the relationship which is brokered between university and community partners. Three separate models of engagement were provided as a visual guide for interaction across boundary spaces, in order for brokering to take place.

The brokering model is identified as a key component of the science shop. Chapter 3 looks at the development of the science shop in Europe, as a manifestation of the brokering model, and its trajectory of development. This traces the origins of the science shop in the Netherlands and highlights different examples of the science shop trajectory in Canada, the USA and Australia. These different examples all provide relevant background and insight into the South African context. Chapter 4 looks at the South African science shop developed at UCT, the Knowledge Partnership Pilot.

This document serves as a guide for further evaluation of the KPP. Based on the experiences gained by further study of engaged scholarship, the brokering model and the science shop, there

is significant background for further analysis of the potential work to be undertaken by the KPP.
Further study will be conducted for future investigations of the work achieved.

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