



Towards the Institutionalization of Research Uptake Management in Sub-Saharan African Universities

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Abstract

This paper examines the process of research uptake institutionalization taking place at universities in the African context. It explores the importance of the emerging concept of Research Uptake Management (RUM) and provides a rationale for why it is becoming increasingly relevant within the higher education sector, both inside and outside of Africa. In so doing, this paper proposes a conceptual framework for strengthening RUM capacity based on an in-depth analysis of primary source material. It unpacks existing capacity development needs across a selection of African universities within the sub-Saharan region, and examines how universities in a nascent stage of developing RUM practices are approaching the institutionalization of research uptake.

Résumé

Cet article examine le processus d'institutionnalisation de l'adoption des résultats de la recherche qui se déroule dans des universités africaines. Il explore l'importance de l'émergence du concept de gestion de l'adoption des résultats de la recherche (RUM) et donne la raison pour laquelle il est de plus en plus pertinent dans le secteur de l'enseignement supérieur, tant à l'intérieur qu'à l'extérieur de l'Afrique. Cet article propose ainsi un cadre conceptuel pour le renforcement des capacités de RUM basé sur une analyse

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approfondie des documents de source primaire. Il énumère les besoins de renforcement des capacités existantes à travers un nombre d'universités africaines sélectionnées dans la région sub-saharienne, et examine comment les universités qui sont dans un stade naissant de développement des pratiques de RUM abordent l'institutionnalisation de l'adoption des résultats de la recherche.

Introduction and Problem Statement

For many African universities the importance of supporting development through in-service training, community service or via extension activities forms part of their formal missions; however these often remain (especially the community engagement function) marginally institutionalized. Most university-driven development-focused projects take place on an ad hoc basis and are usually driven by individuals and groups of individuals resulting in often tenuous relationships and a lack of continuity (Lazarus et al. 2008; Mugabi 2015). Within this process, the transmission of research findings outside the confines of the campus and to the broader community is a key component. However, the interactive exchange of knowledge between universities and those outside them is often fraught. All too frequently quality research is insulated from those who could benefit from it by a concatenation of attitudinal, practical and procedural impediments (Kirkland, Coates and Mouton 2010).

This is not a new problem, nor one peculiar to Africa, and is a topic that has enjoyed much attention from academics and practitioners. Within this body of scholarship there are many terms used to describe the process by which knowledge generated through research finds its way to those who can make use of it – be they practitioners (health workers, farmers, engineers), policy makers or interested members of the general public. The terms 'diffusion of innovations', 'technology transfer', 'research communication', 'research dissemination', 'knowledge utilization', 'knowledge translation' and 'research into use' are familiar across the university and development sectors. Where 'diffusion', 'transfer' and 'dissemination' imply a limited conceptualization of research broadcast from universities or research institutes, 'utilization' and 'translation' denote the similarly limited activities of end users, as they integrate new understanding into their practical or policy oriented work (Landry, Amara and Lamari 2001; Landry, Lamari and Amara 2003; Majdzadeh et al. 2008 performed in 2006-2007 at the Tehran University of Medical Sciences (TUMS). The term 'research uptake' (RU) is here intended to encompass all of these dimensions and will be used to describe the interaction of both push (supply-side) and pull (demand-side) factors, and related engagement mechanisms and facilitators, across all research exchange processes (DfID 2013).

In practice, RU is a process that seeks to harness a broad range of university units (individual researchers, research boards, public relations offices, libraries, ICT and senior university managers) working in concert to identify, produce and announce research with external applications. Crucially, the efforts of these units will need to proceed in dialogue with the potential consumers of research outputs who are involved in providing real-world feedback on the potential applications of research projects/areas as they are developed (DfID 2013). RU is, therefore, a very complex process that requires universities to confront the challenge of ensuring the accessibility of research processes and findings to a variety of different audiences (both within the university and outside) across a variety of different media, often simultaneously.

Indications of the complex relationship between the supply- and demand-side of RU, as well as a range of barriers and facilitators that apply to each specifically within Africa, were documented within a needs assessment and scoping study conducted in 2010 (Kirkland, Coates and Mouton 2010).

On the supply-side, it was found that although universities in Africa are alert to the importance of managing research, awareness, strategies and mechanisms for explicit support for RU are lacking. Furthermore, the ability to monitor and assess the effectiveness and impact of the uptake of research is deficient (Kirkland, Coates and Mouton 2010).

On the demand-side, the study also identified that generally, external stakeholders may be unaware or naive regarding possible research resources available within universities, and/or may lack the absorptive capacity to make use of research once it has been made available. Moreover, within the African context, additional barriers are often experienced. These include a lack of intermediary structures, a lack of trust in local researchers, the de-institutionalization of research and the influence donor organisations have on determining what and who gets funded – sometimes leading to a distortion of power in policy-making (Carden 2009; Kirkland, Coates and Mouton 2010).

This paper explores a collection of RU mechanisms and practices emerging within sub-Saharan African universities, and examines RUM as a new specialism in research management that addresses the coordination of activities concerned with the successful uptake of research evidence.

The (at present) experimental nature of RU, coupled with the idiosyncratic nature of individual national and university contexts, dictates that there is no one agreed method by which RU good practice becomes routine within an institution; rather, a combination of university specific initiatives, focusing on cultivating strengths and addressing weaknesses, have emerged. Here, we will be concerned with exploring trends within this field across a selection of sub-Saharan universities, with the view to developing a framework in principle for strengthening RU and RUM within similarly situated institutions.

Literature Review and Current Approach

The study and practice of knowledge utilization have evolved rapidly over the previous decades to emerge as a coherent and integrated body of scientific investigation (Estabrooks et al. 2006; Rogers 1995).

A relatively recent development in the field is the emergence of knowledge translation models, specifically in the field of medicine. Here, recognition is given to the realization that translating knowledge for discrete target audiences is a lengthy and complex process. The approach identifies that a systems-based intervention, built upon a process of stakeholder focused engagement and interaction, is called for (Straus, Tetroe and Graham 2009) health care providers and policy-makers.

Within this context, the strength of networks and relationships cultivated by a university (and individual university staff members) with consumers of research outputs is a key determining factor in effective knowledge transfer. In this the geographic proximity of the actors involved often has a bearing (Jaffe, Trajtenberg and Henderson 1993; Sorenson, Rivkin and Fleming 2006) as evidence of the extent to which knowledge spillovers are geographically localized. We find that citations to domestic patents are more likely to be domestic, and more likely to come from the same state and SMSA as the cited patents, compared with a "control frequency" reflecting the pre-existing concentration of related research activity. These effects are particularly significant at the local SMSA. It therefore behoves universities wishing to implement such systems-based changes to carefully consider how they can generate and nurture these networks within their individual geographic contexts.

In seeking to address this issue Ellen et al. (2011), in a review of twenty-six studies in the healthcare field, provide analysis and categorization of infrastructure components found to be effective in knowledge transfer practices. Ellen et al. subsequently drew on these findings in contributions to the WHO's guiding framework for the application of knowledge transfer in the ageing and health sectors. In this document Ellen outlines a range of key aspects in supporting the climate and context for research use. These include linkages and exchange efforts, knowledge creation, push-efforts, pull efforts and evaluation (WHO 2012).

The current study has been heavily influenced by these findings – and the work of Ellen in particular – in seeking to propose a framework appropriate for conceptualizing the systems-based institutionalization of RU within sub-Saharan African universities. From this body of work, five key focus areas integral to this process have been identified (Table 1). It is an exploration and discussion of these areas within the sample group of African universities that forms the basis of this paper.

It is important to note that these key focus areas are all factors that an institution can reasonably expect to directly influence. Ellen and others do discuss a number of external factors that can influence the knowledge transfer process, such as the demand for knowledge from the external environment and the absorptive capacities and skill levels of external consumers of knowledge. These will not be explicitly explored and discussed here, as the purpose of this article is to explore issues that universities themselves can directly influence through internal management and change processes.

Table 1: Capacity development focus areas for strengthening RU capacity in an institution (adopted from Ellen et al. 2011)

Focus area 1	The climate for RU and the institutional research context
Focus area 2	Institutionalizing RU into knowledge production processes and support
Focus area 3	Facilitating push factors through exchange
Focus area 4	Facilitating pull factors through exchange
Focus area 5	Monitoring and evaluation efforts

Focus Area 1: Climate for RU and the Institutional Research Context

On an organizational level, culture and context play a role in the nature of RU interventions that can be effectively implemented. This includes organizational processes that may not directly support RU as a mainstream activity of a university, but which, nevertheless, contribute to its effective institutionalization (Humphries et al., 2014 peer-reviewed and grey literature that explores the use of evidence in program management. Specifically, various organizational enablers or contextual factors, such as the mission, vision, goals, culture and rewards system of the university, have been found to contribute to effectiveness in this sphere (Majdzadeh et al. 2008 performed in 2006-2007 at the Tehran University of Medical Sciences (TUMS).

Other studies also highlight the following as possible areas for consideration within this context:

- importance of management skills and infrastructure (Mitton et al. 2007)
- importance of strong, effective leadership (Mitton et al. 2007);
- role of incentive structures, including promotions and assessment criteria (HEFCE 2008);

- importance of an increased awareness of, and higher profile for, RU in the university (HEFCE 2008);
- need to support academics regarding the additional time burden of RU activities (Kirkland, Coates and Mouton 2010);
- harmonization of policies that can influence the nature and effectiveness of RU activity (IP policy, R&D policy, social engagement policy) (HEFCE 2008).

Focus Area 2: Institutionalizing RU in Knowledge Production Processes and Support

On the supply-side, the literature discusses a range of considerations, including the process of knowledge production as well as ‘push-factors’ through which knowledge becomes disseminated. RU activities need to be integrated into the complete research process and researchers need to start thinking about RU and impact when they scope and design their studies and projects (Grobbelaar and Kirkland 2013). The researcher will, right from the planning stages of a project, need to engage with stakeholders to ensure understanding of the context of the research, scope and budget for RU phases and the legacy phase (Andrews 2005). This will require the establishment of capacity for the co-production of knowledge between researchers and stakeholders and, more specifically from a university’s point of view, the development of stakeholder engagement and communication skills among researchers (Humphries et al. 2014) peer-reviewed and grey literature that explores the use of evidence in program management.

Focus Area 3: Facilitating Push-factors through Exchange

A range of other capacity related, and sometimes more subtle and complex, considerations are identified in the literature regarding the process of facilitating push factors, specifically with regards to engaging policy makers and governments.

Due to the limited volume of research conducted by many African universities, there is a lack of adequate, context relevant research for the public good (Grobbelaar and Kirkland 2013). In such situations, governments face a supply shortage of domestically produced ideas and evidence for policy making, which, in turn, can reinforce a dynamic where governments increasingly turn to external sources and expatriates at the expense of local researchers (Stone 2001; Carden 2009).

Further compounding the issues mentioned above, the effectiveness of push-factors may be further complicated through power dynamics, as many policy development processes in Africa remain affected and in some cases

driven by donor funding (Carden 2009). This then leads to a situation in which universities and local organizations may have little say in the design and execution of research and the eventual development of such policies. In many cases African academics are only involved in a part-time capacity as consultants to the full-time employed foreign players with little leeway in spearheading a process informed by local knowledge. This has implications for the development of institutional capacity as well as for the development of a trust relationship between key stakeholders and university staff (Collins and Rhoads 2010).

Moreover, the relationship between the evidence produced and the appropriate solution to policy-issues may not be clear-cut. Often, science is contested and clear answers are lacking, and this can raise issues of censorship, control and ideology (Edwards 2005). Closely linked with this is the validity of research and consideration that epistemologies may lead to different interpretations of knowledge (Edwards 2005; Oliver et al. 2014). Personal contact and opportunities to connect and share challenges and research projects play an important role in combatting these difficulties.

Firstly, the accessibility of information and access to expertise can be supported through public engagement events (e.g. science fairs, radio, TV), publicly accessible databases of university expertise or public involvement in research (content management databases and the library). A number of the universities involved in this study have demonstrated the applicability of these actions.

Secondly, incentives to develop external linkages and support staff to engage with a range of stakeholders can prove effective (Ellen et al. 2011; WHO 2012). Here, mechanisms such as keeping databases of external contacts and potential research users, research networks, community based research and network development, and enterprise focused development of local and international business networks have proved to be effective (PACEC; CBR 2009).

Focus Area 4: Facilitating Pull Factors through Exchange

The development of capacity on the demand-side of the RU equation is often a difficult area for universities to address. Here, the lack of adequate absorptive capacities for new knowledge across a range of areas can pose a challenge for external consumers of research (Becheikh and Ziam 2010). Issues that can impact on absorptive capacities include attitudinal issues such as a lack of interest, a resistance to adapt to new ideas or anti-intellectualist attitudes (Oliver et al. 2014). Inadequate structures in target/stakeholder organizations can also play a role in limited absorptive capacity, as can limitations at the level of staff capacity (Ellen et al. 2011; WHO 2012; Becheikh 2010).

Furthermore, awareness around the very different priorities that politicians and/or policy makers have from researchers is important, just as the politicization of issues may erode the value attached to rigorous research approaches to policy analysis (Stone 2001). Stakeholders in senior positions are often under enormous time pressure, with many issues and problems competing for their time, which may further impact on perceived demand for research (Edwards 2005).

Proactive measures to ensure awareness and the presence of university staff on forums and advisory bodies can assist in stimulating demand for research, collaborative research projects or industry sabbaticals for academics (PACEC; CBR 2009).

Focus Area 5: Evaluation Efforts

A review of organizational level frameworks confirm that some progress has been made in terms of how to evaluate the effectiveness of RU activities and mechanisms on an institutional level (Hart and Northmore 2010; Hughes, Ulrichsen and Moore 2010). However, to date, there have been few rigorous evaluations of such initiatives at an institutional level (Ellen et al. 2011; WHO 2012). It is hoped that the findings of this article will inform future studies in this area.

Methodology and Source Material

A mixed method approach was utilized for gathering quantitative and qualitative data for this study. Primary data gathering took place over a two-and-a-half year period (2012–14) within the context of the Department for International Development's (DfID) funded programme: Development Research Uptake in Sub-Saharan Africa (DRUSSA) (DfID 2014).

This article predominantly draws on the data and analysis of two benchmarking surveys completed through the DRUSSA programme, one administered in 2012 (Falk, Harber and Roberts 2012) and another in 2014 (Falk, Harber and Roberts 2014). The first of these surveyed twenty-four¹ sub-Saharan African universities (across twelve countries) and sought information regarding current practices, planned changes and identified challenges in implementing RU. The following tables outline the universities included in this project from a cross-section in sub-Saharan Africa, namely nine from East Africa, eight from southern Africa and seven from western Africa:

Table 2: Eastern African universities that form part of the DRUSSA programme

East Africa	City	University name
Ethiopia	Addis Ababa	Addis Ababa University
Kenya	Nairobi	University of Nairobi
Kenya	Eldoret	Moi University
Kenya	Nairobi	Kenyatta University
Mauritius	Mauritius	University of Mauritius
Rwanda	Butare	National University of Rwanda
Rwanda	Kigali	Rwanda Biomedical Centre/Kigali Health Institute
Uganda	Mbarara	Mbarara University of Science and Technology (MUST)
Uganda	Kampala	Makerere University

Table 3: Southern African universities that form part of the DRUSSA programme

Southern Africa	City	University name
Botswana	Gaborone	University of Botswana
South Africa	Alice	University of Fort Hare
South Africa	Cape Town	Cape Peninsula University of Technology
South Africa	Bloemfontein	University of the Free State
South Africa	Medunsa	University of Limpopo
Zambia	Lusaka	University of Zambia
Zimbabwe	Harare	University of Zimbabwe
Zimbabwe	Bulawayo	National University of Science and Technology

Table 4: West African universities that form part of the DRUSSA programme

West Africa	City	University name
Cameroon	Yaoundé	Université de Yaoundé I
Cameroon	Buea	University of Buea
Ghana	Accra	University of Ghana
Ghana	Kumasi	Kwame Nkrumah University of Science and Technology
Nigeria	Ile-Ife	Obafemi Awolowo University
Nigeria	Ibadan	University of Ibadan
Nigeria	Calabar	University of Calabar

Upon completion of the first benchmarking survey, senior decision makers from the participating universities took part in a prioritization exercise through which the representatives collectively developed a set of ‘Statements of Research Uptake Good Practice’ for implementing RUM (Falk, Harle and Roberts 2012). These statements form an integral part of the priorities identified for the implementation of RUM in this article.

A series of campus workshops within each of the participating universities provided information regarding the maturation of approaches taken in relation to the identified priorities over the following two years. The on-going implementation of RUM, alongside attendant challenges and successes, were tracked through the completion of a second benchmarking survey in 2014, which was designed in dialogue with the first survey. The data collected from these campus workshops and the two benchmarking surveys forms the basis of this article’s profile of RU within sub-Saharan African universities.

Priorities for Supporting RU within Sub-Saharan African Universities

The following section illustrates a series of good practice mechanisms and priorities identified by the participating universities in 2012. These were informed by scholarship regarding RU implementation and refined through first-hand consideration of current structures, practices and capabilities within contemporary sub-Saharan African universities.

The Climate for RU and the Institutional Research Context

Through the engagement with these universities, it was clear that although all participants viewed RU as a high priority, the initial introduction of the term Research Uptake was not necessarily viewed as a process that can be managed and institutionalized. Instead it was perceived to have a key focus on the dissemination or push-perspectives. In setting out to frame priorities for establishing an institutional climate for research and RU, the universities agreed that ‘the overall mission and strategy of the university should reflect the need to produce findings for wider use’ (Falk, Harber and Roberts 2012).

For those institutions where this was already included within their core missions (Kirkland, Coates and Mouton 2010), a more pressing priority was to develop ‘a clear research strategy document which explicitly recognises the importance of research for social, economic and development needs’ (Falk, Harle and Roberts 2012). The universities also identified that for RU activities to be effective, ‘the university’s research strategy should explicitly recognise the need to support research uptake activity’ (*ibid.*). This was identified as a significant gap in current approaches to RUM and, as we shall see below, subsequent to the establishment of these statements of intent, a number of universities have introduced, or are in the process of introducing, new policy and strategy documents that engage with these priorities (Falk, Harber and Roberts 2014).

The universities observed that these policy and strategy documents will need to be supported across the different units within a university to ensure that the top-down initiatives become institutionalized (*ibid.*). With this in mind, the universities observed that ‘detailed research uptake implementation plans/roadmaps/guidelines should be developed at operational level (by the Research Office or similar) to facilitate [the] implementation of policies at department/faculty level and for individual academics’ (Falk, Harle and Roberts 2012). The monitoring of such developments is paramount to the institution’s on-going approach to RU. The universities specifically note that ‘[an] institution should collect sufficient information on research uptake activity to inform future policy’ (*ibid.*). This is a necessary precondition in establishing and refining achievable, context specific goals to set within RU policy and supporting implementation guides.

Institutionalizing RU in Knowledge Production Processes and Support

As we have seen, it is important for institutions to set realistic goals, and this applies equally to initiatives to integrate RU activities specifically into knowledge production. This will be moderated through the policy direction adopted

by the institution, and, perhaps most pressingly, limited by the resources available. Where possible though, the participating universities identified that an institution ‘should support and facilitate research uptake activities in [the] job descriptions of academic staff and, when appropriate, clearly state the expectations on academic staff to be involved in research uptake activities’ (*ibid.*).

It was observed that the provision of training, where necessary, needs to be carefully scoped with the view to desired impact and sustainability (*ibid.*). It is also important for institutions to consider how they can build on their existing strengths and anticipate potential future benefits by ensuring that staff with RU responsibility ‘have access to appropriate external expertise’; ‘have access to designated budgets, for both internal and external research uptake activities’, and ‘are encouraged to network with similar staff at other universities in the region’ (*ibid.*). An overriding axiom for these considerations, also highlighted by the universities, is the need to ensure that any new actions planned ‘take into account competing demands on academic time’ (*ibid.*).

Facilitating Push-factors through Exchange

The effective facilitation of push-factors for RU will, in no small part, be influenced by steps taken by the institution in the spheres of establishing a climate conducive for RU, policy development, knowledge production and staff training. Specifically for academic staff, the universities concurred that ‘research uptake activity should be embedded in overall research and community service objectives and should be included in relevant staff induction or postgraduate training programmes’ (*ibid.*). It is also considered desirable for clear processes to exist to determine where responsibility lies for RU, between academics/research teams, the university and any external sponsor (*ibid.*).

Within this context, universities will need to focus on the role played by support staff. The universities identified as a priority that ‘where professional staff with research uptake responsibilities are based in different offices, clear mechanisms should exist for them to meet with each other and share information on research activities that the university is engaged in’ (*ibid.*). This can have broad implications, given the array of different offices and units identified as having an interest in research uptake activities (see Figure 4), and ‘clear processes should exist for decisions to be taken about the level of support available for research uptake in specific cases’ (*ibid.*).

The effective maintenance of institutional research repositories, by librarians and/or archivists, allows an institution to identify exactly what knowledge it is producing. It is considered a priority for universities to ‘have mechanisms in place to identify research with uptake potential at an early stage’ (*ibid.*).

This information can then be used to tailor externally facing elements (such as those identified as priorities by the universities themselves) (see Figure 5) to key target groups and audiences (*ibid.*).

Facilitating Pull-factors through Exchange

The universities identified that key to the effective facilitation of pull-factors in RU is the establishment of ‘mechanisms for potential users of research to be aware of and, where appropriate, involved in assessing the potential of research at an early stage’ (*ibid.*). To this end, there is an ambition to adapt current practices whereby engagement with potential end-users at an early stage of a research project occurs primarily not as a part of university policy, but on an ad hoc basis as required by external funders (Falk, Harber and Roberts 2014), into such engagement occurring as a regular element of the research cycle. One of the priorities identified by the universities in realizing this ambition is that institutions ‘should provide, or have access to, qualified staff to assist academics in identifying research suitable for research uptake, and advice on the most appropriate time and means to bring research to external stakeholders and users’, as well as providing ‘assistance in producing and distributing materials about their work to external audiences’ (Falk, Harle and Roberts 2012).

Evaluation Methods

Evaluation methods for assessing the effectiveness of RU activities will necessarily be dictated by the scope of the activities adopted. At least one university has reported the benefit of maintaining a registry of data on project specific RU activities (Falk, Harle and Roberts 2014), and all universities specifically observed that ‘mechanisms should exist to review the effectiveness of external communication activities’ (Falk, Harber and Roberts 2012). More broadly, the proposed introduction of RU activity reports as a standing item in faculty/department meetings could offer an appropriate avenue for monitoring and scrutiny, which could, in turn, act to support the universities’ consideration that appropriate bodies, such as an institutional research committee, ‘monitor the progress of research uptake policies at regular intervals’ (*ibid.*).

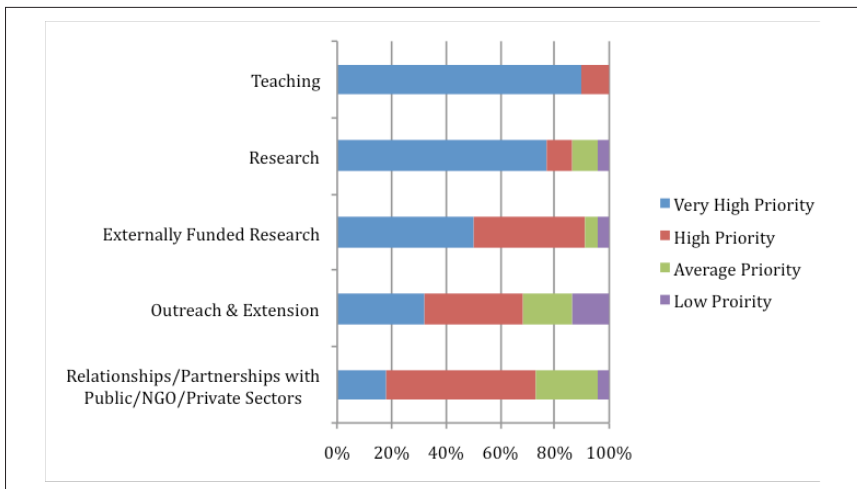
Current RU Profile at Selected Sub-Saharan Universities

This section examines in detail some of the steps that the participating universities have taken in relation to the priorities and good practice mechanisms identified in 2012. It reflects the current profile of RU implementation within the universities in 2014 relative to 2012, and highlights some of the successes and challenges experienced by the institutions in undertaking these activities.

Climate for RU and the Institutional Research Climate

Teaching, research and community service form the core mission of most of the participating universities, and these are often used as assessment criteria in the promotion process (Falk, Harber and Roberts 2014). However, these three elements are not prioritized equally. As can be seen in Figure 1, the role of teaching has a uniformly high or very high priority across the sample. Similarly, research and externally funded research are ranked as high or as very high priorities by upward of 85 per cent of respondents.

Figure 1: Universities' ranking of their institutional priority areas, 2014 (N=22)

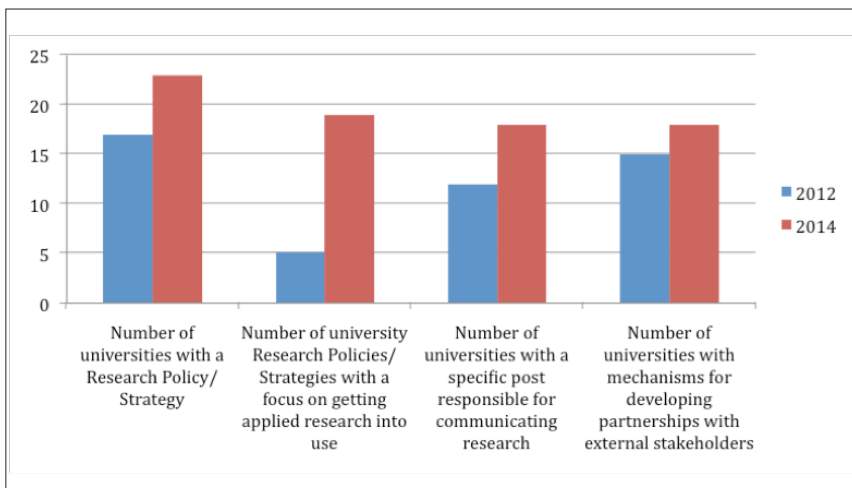


Source: Falk, Harber and Roberts 2014.

Within this context, the priority placed upon the production of research outstrips the importance afforded to aspects related to effecting the uptake of the research produced: aspects such as outreach/extension activities and establishing relationships/partnerships with external stakeholders. Yet interest in these activities is growing. The results for 2014 demonstrate an increase, relative to the 2012 results, in the number of representatives who regarded these RU related aspects as a high or very high priority within their institutions. In that year only 40 per cent of representatives rated outreach and extension activities as high or very high; and only 50 per cent gave a high or very high rating to relationships/partnerships with external stakeholders (Falk, Harber and Roberts 2012).

This change in priorities, towards a greater recognition of RU related activities, is starting to be reflected within institutional documents. Twenty-three of the participating universities report that they have a research policy/strategy, and nineteen of these place a focus on getting applied research into use (Figure 2). This represents a modest increase in overall policies, when compared to the seventeen reported in 2012, but a dramatic rise in such policies that place an emphasis on getting research into use, up from five in 2012 (*ibid.*).²

Figure 2: Comparison of the emergence of developing structures to support RU within participating universities, 2012–14



Source: Falk, Harber and Roberts 2014.

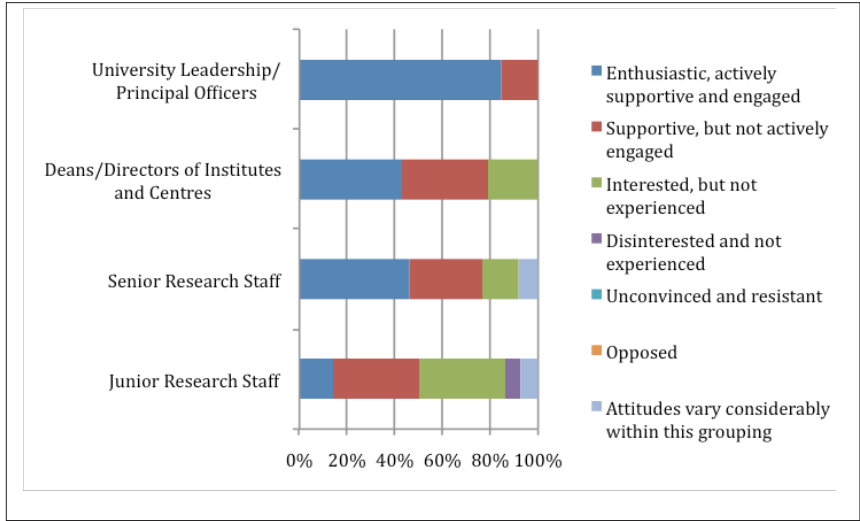
This alteration in policy emphasis has coincided with a rise in the number of universities with a specific post(s) responsible for communicating research, as well as the number of universities which have mechanisms for developing partnerships with the public/NGOs/private sectors. Yet, for many universities, the institutionalization of RU is in its nascent stages. Even within institutions with formally sanctioned legislation, university representatives note that many of the new RU focused policies and positions are insufficiently supported financially or by procedural ‘how to’ guides and staff training. With regard to staff training and support, only 64 per cent of respondents indicated that their university provides training or resources to academic staff to assist with RU (Falk, Harber and Roberts 2014). More generally, one respondent observed: ‘Plans and ideas have been formed, but we have not implemented [them]... The overall time spent on managing this institutionally is a challenge, given

that it competes with other strategic priorities. Resources may be required for a dedicated research uptake manager. We have to spend more time at lower levels e.g. ensuring that research uptake becomes a standing item at faculty level meetings’ (*ibid.*).

Institutionalizing RU into Knowledge Production Processes and Support

Senior management interest and engagement in RU was reportedly very strong in 2014 (the integration of an RU emphasis into institutional policy documents and the creation of specialist roles for communicating research support this). This is broadly echoed amongst both junior and senior academics (Figure 3).

Figure 3: Level of interest in RU activity among senior management and researchers, 2014 (N=22)



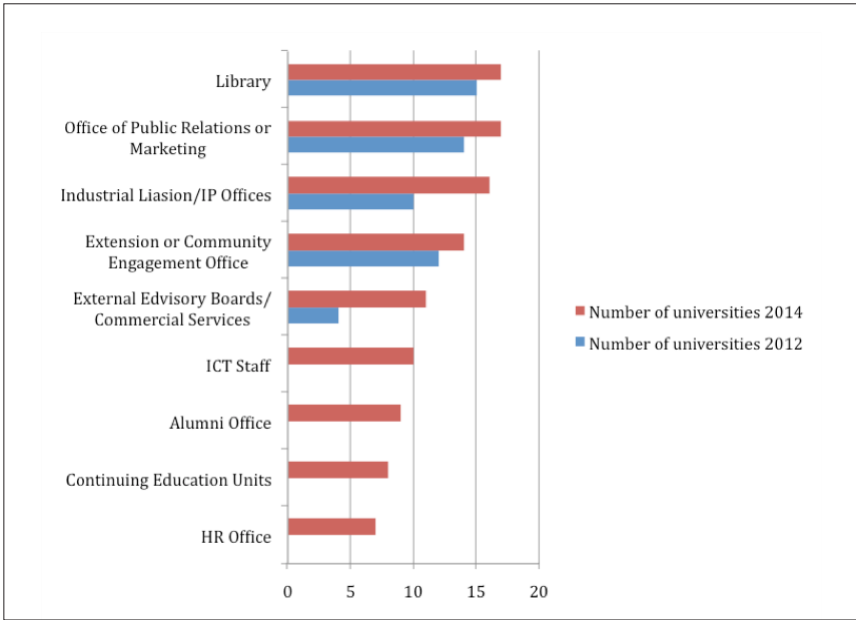
Source: Falk, Harber and Roberts 2014.

Yet, less than half of these academic staff members (junior and senior) report that they have taken steps to act upon this interest. A lack of support mechanisms such as the training currently available for staff (noted above) would appear to be a contributing factor here. One respondent noted a number of other contributing factors, including ‘inadequate motivation on the part of researchers, inadequate time [and] insufficient research funding to cater for these activities’ (Falk, Harber and Roberts 2014).

No university reported that these groups (senior managers and research staff) are outright opposed to RU activities; however, responses that ‘attitudes vary considerably within this grouping’, present among both junior and senior academics, confirm some reticence. Individual responses, such as the example quoted above, make clear that where academic staff opposition exists, contributing factors are the current lack of incentives for engaging in RU activity, coupled with the demands of heavy teaching workloads.

While interest in RU activity among university leaders and academics can be considered broadly positive, interest is not restricted to these groups and a number of other units across the universities have similarly identified interest. These interests were tracked over the period 2012–14, and the results, reproduced in Figure 4, indicate a broadening base of interest in RU activities.

Figure 4: Universities with offices reporting an interest in RU activity 2012–14³



Source: Falk, Harber Roberts 2014

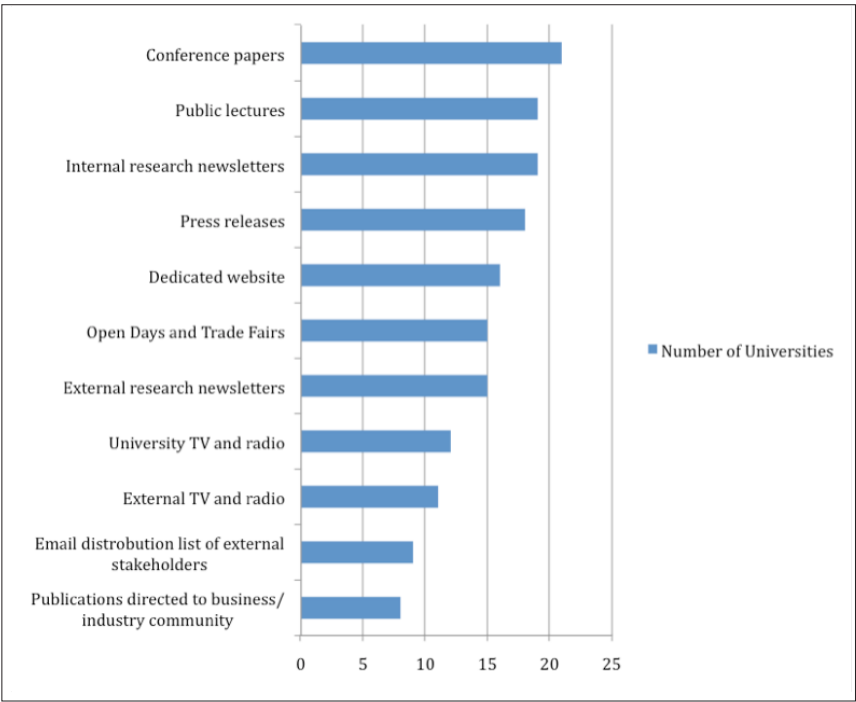
Staff members within a number of these support units can play important roles in the uptake of research findings, yet respondents commonly note that communicating research between units is still difficult and that this has a

detrimental impact on a university’s ability to coordinate research dissemination efforts (Falk, Harber and Roberts 2014).

Facilitating Push-factors through Exchange

The organization of university resources to undertake RU activity by disseminating knowledge is understandably different from university to university, although there are a number of activities and communication channels common across the group. As can be seen in Figure 5, the most cited channels for announcing research are through conference papers and a combination of external media (including print, television, radio and social media) and internally produced publications (university newsletters and the university web site). Many universities also report that they employ public-facing events, including open days and conferences, as opportunities to announce research.

Figure 5: Research communication channels employed by universities, 2014

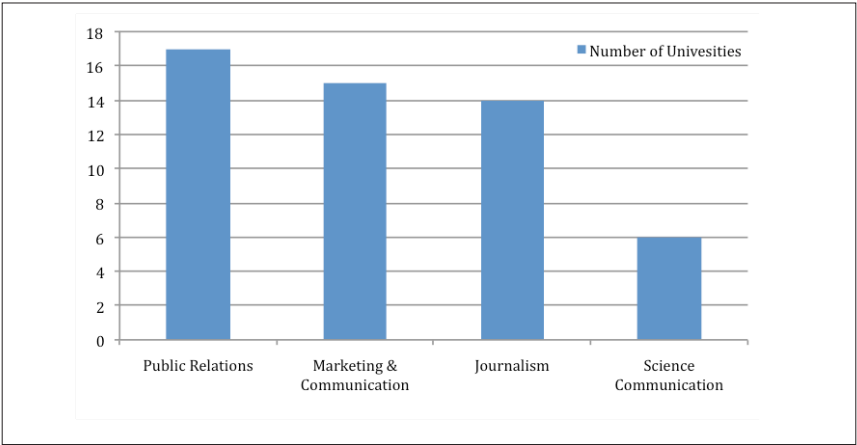


Source: Falk, Harber and Roberts 2014.

Eighteen of the universities report that they maintain central offices with responsibility for collating and distributing material on behalf of the university, typically a Public Relations Office or a Marketing and Communications Office working in coordination with departments, faculties and research centres in order to collect the relevant information. These arrangements operate under varying levels of overall control and efficiency; only ten universities report that they have a communications strategy, with a further five universities currently developing such a strategy. This relative lack of coordinated approaches to dissemination is a contributing factor in the difficulty, noted above, in the communication of research between university units.

Systemic difficulties in coordinating and communicating a message about a university’s current research are likely exacerbated by a lack of skills capacity among staff, particularly those in externally facing offices. Respondents report that many of those employed within offices responsible for the coordination of institutional publicity have training and experience across a variety of relevant areas, including public relations, journalism and marketing and communication; however only six respondents report that their staff members have qualifications or experience in science communication.

Figure 6: Universities with communications staff with training in specific areas of communication, 2014



Source: Falk, Harber and Roberts 2014.

The lack of science communication skills is likely a contributing factor where difficulties persist in the communication of research results via marketing or public relations offices. Having said this, some universities are starting to register positive results simply through greater communication and contact between academics and university communications staff. One respondent (an academic) reported that: ‘working closer with the marketing department has resulted in more visibility for research, and an increase in focus on research output’ (Falk, Harber and Roberts 2014).

Facilitating Pull-factors through Exchange

Universities report that they prioritise a number of different methods designed to generate and foster demand for research outputs among external stakeholders. This covers a whole range of activities specific to an individual research project that occur over the life-span of that project, as well as activities that are embedded within university procedures and structures and impact across whole areas of research.

The majority of respondents (Figure 7) ranked placing government/public sector representatives (73%) and industry/private sector representatives (64%) on university research boards as either a high or a very high priority. Similar results are observed for establishing collaborative research projects with other universities (64%), while approximately half of respondents ranked community–university participatory research partnerships (55%) and collaborative research with non-higher education actors (55%) as high or very high.

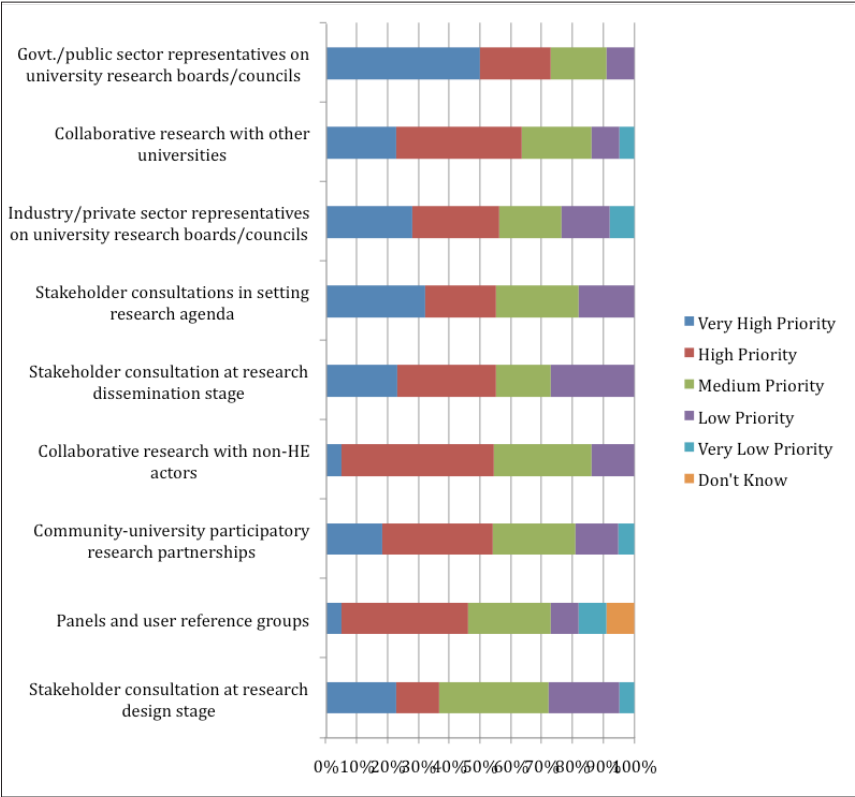
In terms of stakeholder engagement for individual research projects, more universities place greater emphasis upon such activities at the end of the project (the dissemination stage) rather than earlier in the process (the design stage). Within this context, many respondents indicate that the decision to involve external stakeholders in the design aspects of a project is not typically driven by university policy, but is an element of external requirements – usually those of funding agencies – which stipulate that stakeholders and/or beneficiaries of research are involved in the planning/design of the project (Falk, Harle and Roberts 2014).

Evaluation Methods

Three quarters of respondents in 2014 record that their university maintains a record of institutional research activities, either through institutional repositories or through annual reports. Some respondents also noted that their university maintained records of research activities at the departmental level (such as in the university library, the research office or within individual departments or faculties). These recording practices do not, however, specifically relate to

the recording of the university’s dissemination activities. Indeed, over half of respondents (55 per cent) confirm that their university does not maintain records of research dissemination activities. This number is consistent with the responses collected in 2012 (Falk, Harber and Roberts 2012), indicating that there has been little movement on addressing this issue over the two year period (Falk, Harber and Roberts 2014). For those universities starting to move in this direction, there have been some noticeable changes. One respondent noted: ‘More projects are demonstrating impact and uptake than in the past, since we started to put an emphasis on monitoring the level of uptake. We also notice that projects that can show uptake tend to be funded a lot easier’ (*ibid.*). These findings are an early indication of a nexus between effective RU activities and increased research funding.

Figure 7: Universities’ priorities for external stakeholder engagement (N=22)



Source: Falk, Harber and Roberts 2014.

Conclusion

The development of staff capacity, implementation procedures and sustainable support for RUM on an institutional level is a challenging process. While there is a general movement towards enshrining RUM in policy and strategy documents and a rising interest among university staff (management, academic and support) for engaging in RU activity, the implementation of RUM is still at a nascent stage both within the institutions examined for this article and more broadly across the sector.

The figure below is intended as an in-principle framework guide for universities similarly in the early stages of RU and RUM engagement. It seeks to capture the lessons learnt from the experiences of the sample universities, and links current challenges to practical responses under each of the five focus areas.

Key Focus Area	Profile / Challenges to RU in sub-Saharan African universities	RU Priorities in sub-Saharan African universities
Institutional climate for research and RU	• Lack of integration and support for RU activity in institutional mission and vision statements • Lack of integration of RU goals in research strategies and policies • Extension and outreach activities not priorities for universities • Career structures and incentive mechanisms do not foster and support RU activities	• The overall mission and strategy of the university should reflect the need to produce findings for wider use • The university should have a clear research strategy document which explicitly recognizes the importance of research for social, economic and development needs • The university's research strategy should explicitly recognize the need to support RU activity • Detailed RU implementation plans/roadmaps/guidelines should be developed at operational level (by Research Office or similar) to facilitate the implementation of policies at department/faculty level and for individual academics • An institution should collect sufficient information on RU activity to inform future policy

Knowledge production	• Lack of strong research culture • Heavy teaching workloads • Staff engaged in consultancy • Limited co-ordination of internal research activities • Need for overview of what research is going on in the university • Deficient infrastructure (e.g. ICT and laboratories)	• The university should support and facilitate RU activities in the job descriptions of academic staff and, when appropriate, clearly state the expectations on academic staff to be involved in RU activities • Staff with RU responsibility should: • have access to appropriate external expertise • have access to designated budgets, for both internal and external RU activities • be encouraged to network with similar staff at other universities in the region. • Policies should take into account competing demands on academic time and, where appropriate, encourage research active academic staff to engage in RU activity
Facilitating push factors	• Lack of skills and training among staff for planning RU, stakeholder engagement and science communication • Lack of co-ordination among different units within the university regarding RU activity • Unclear accountability for individual and unit roles and responsibilities in RU activities	• RU activity should be embedded in overall research and community service objectives and should be included in relevant staff induction or postgraduate training programmes • Clear processes should exist to determine where responsibility lies for RU, between academics/ research teams, the university and any external sponsor • Where professional staff with RU responsibilities are based in different offices, clear mechanisms should exist for them to meet with

	• Lack of institutional communication and/or marketing strategy • Lack of appropriate funding mechanism to support research activity	each other and share information on research activities that the university is engaged in • Clear processes should exist for decisions to be taken about the level of support available for RU in specific cases • The university should have mechanisms in place to identify research with uptake potential at an early stage
Facilitating pull factors	• Poorly understood external stakeholder environment • Lack of understanding among external stakeholders of the research process • Unwillingness among academics to engage with external stakeholders during the planning stages of a project • Lack of structures and capacity among external stakeholders to adopt knowledge • Lack of understanding among external stakeholders of what is available from universities	• Universities should develop mechanisms for potential users of research to be aware of and, where appropriate, involved in assessing the potential of research at an early stage • Universities should provide, or have access to, qualified staff to assist academics in identifying research suitable for RU, and advice on the most appropriate time and means to bring research to external stakeholders and users • Academics should be provided assistance in producing and distributing materials about their work to external audiences

Evaluation methods	• Limited tracking and evaluation of research impact • Lack of skills and resource capacity to construct and maintain monitoring and evaluation processes	• Supporting M&E capabilities on individual projects or at institutional level • Integrating M&E into policies and annual reports • Sharing success stories to build momentum • The university should maintain a registry of data on project specific RU activities • Mechanisms should exist to review the effectiveness of external communication activities • The university research committee (or equivalent) should monitor the progress of RU policies at regular intervals
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Acknowledgements

We acknowledge the assistance of UKAID which is funding the DRUSSA initiative and the valuable knowledge and experience of John Kirkland, Kar-rine Sanders, Liam Robertson and Emma Falk from the Association of Com-monwealth Universities; Diana Coates of Organisation Systems Design; and Gideon de Wet, University of Fort Hare.

Notes

1. There were twenty-four participating universities in 2012. This number fell to twenty-three in 2013, and was reduced again to twenty-two in 2014.
2. It should be noted that interrogation of these figures, through further dialogue with university representatives, indicates that at least four of the new policies/strategies, with a focus on getting research into use, had not been formally implemented at the time of writing; they are undergoing internal review before final approval by the appropriate bodies, and it is anticipated that all will have received this approval over the course of 2015.
3. Those units cited without a value for 2012 were added to the survey following feedback from participating universities during a series of university specific workshops held in 2013 and early 2014.

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